

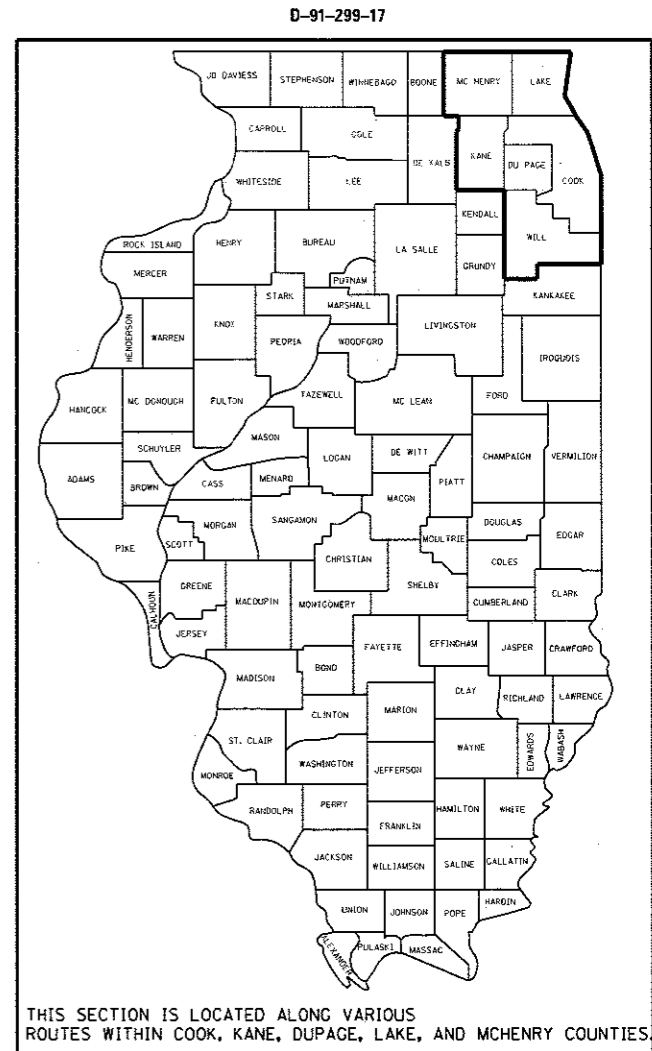
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 62F46		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

# PROPOSED HIGHWAY PLANS

**ROUTE: VARIOUS EXPRESSWAYS AND ARTERIAL  
HIGHWAYS – NORTHERN PART, DISTRICT ONE  
GUARDRAIL REPAIR  
SECTION: 2017-027GRR  
COUNTY: VARIOUS  
C-91-299-17**



**SEE LOCATION MAPS  
SHEETS 5 THRU 13**

C.U.A.N.  
CHICAGO UTILITY ALERT NETWORK  
1-312-744-7000

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: J. ALAIN MIDY (847) 221-3056  
PROJECT MANAGER: ISSAM RAYYAN (847) 705-4178

CONTRACT NO. 62F46

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED JUNE 23 20 17

*Anthony J. Quigley* / *AS*  
REGIONAL ENGINEER

*Matthew M. Addis* / *PE*  
ENGINEER OF DESIGN AND ENVIRONMENT

*Aug 15* 20 17  
DIRECTOR OF PROGRAM DEVELOPMENT

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

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LIST OF STATE STANDARDS

630001-11	STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631006-08	TRAFFIC BARRIER TERMINAL, TYPE 1B
631011-10	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-06	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-15	TRAFFIC BARRIER TERMINAL, TYPE 6
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS, DAY ONLY
701336-06	LANE CLOSURE, 2L, 2W, WORK AREAS IN SERIES, FOR SPEEDS > 45 MPH
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-10	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEED $\geq$ 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY FOR SPEEDS $\geq$ 45 MPH TO 55 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTANT OR MOVING OPERATIONS $\leq$ 40 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W, WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-06	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811 OR "CUAN" AT (312) 744-700 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

ALL WORK IS TO BE REPLACED IN KIND OR AS INDICATED ON THE CONTRACT QUANTITY SHEET.

GUARDRAIL WORK WILL INCLUDE ALIGNMENT AS NECESSARY TO RESTORE THE RAIL TO THE ORIGINAL CONDITIONS.

REMOVAL OF DAMAGED MATERIALS WILL INCLUDE DISMANTLING, LOADING, HAULING AND DISPOSAL. THE WORK SITE WILL BE LEFT IN A SAFE AND ORDERLY CONDITION.

NO MATERIAL SHOULD BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.

ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE HEREWITH ATTACHED.

THE LIMITS OF THE DAMAGED GUARDRAIL WILL BE MARKED WITH PAINT. THE REPLACEMENT PARTS AND THE QUANTITIES INDICATED ARE WITHIN THESE LIMITS AS MARKED.

REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME.

GUARDRAIL MARKERS SHALL NOT BE ATTACHED TO TERMINAL SECTIONS.

THE CONTRACTOR SHALL TELEPHONE THE IDOT BUREAU OF TRAFFIC OPERATIONS, ELECTRICAL MAINTENANCE SECTION AT 708-524-2145 TO REQUEST THE LOCATE FOR INDEGROUND ELECTRICAL AND/OR FIBER CABLE PRIOR TO ANY DIGGING AS PER THE CONTRACT.

REMOVAL OF EXISTING TERMINAL SECTIONS INCLUDED IN COST OF NEW TERMINAL SECTIONS

FILE NAME =	USER NAME = pyzanoskurb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 6/29/2017	DATE -	REVISED -			CONTRACT NO. 62F46					
						SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.

URBAN

URBAN

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE 0021						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE 0021	100% MCHD 0021				
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	396	317	79				
63100041	TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1				
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	8	6	2				
63100070	TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	1	1				
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	5	4	1				
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	44	35	9				
63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	6	5	1				
78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	283	226	57				
72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	20	16	4				
X0321563	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL)	EACH	184	147	37				
X2300001	MISSING OR FAILED ANCHOR CABLES	EACH	10	8	2				
X2300002	MISSING OR FAILED LAG BOLTS	EACH	10	8	2				
X4402302	CURB REMOVAL (PARTIAL)	FOOT	99	79	20				
X6300210	GUARDRAIL BLOCKS	EACH	990	792	198				
X6300215	RAIL ELEMENT PLATES	EACH	1287	1030	257				
X6300217	RAIL ELEMENT PLATES (RADIUS)	EACH	52	42	10				

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE 0021						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE 0021	100% MCHD 0021				
X6300222	CONNECTING END SECTION	EACH	2	1	1				
X6300224	RETURN END SECTION	EACH	3	2	1				
X6300225	SINGLE END SECTION	EACH	14	11	3				
X6300230	STEEL POSTS	EACH	703	562	141				
X6300310	REMOVE AND REPLACE GUARDRAIL CHANNEL	EACH	30	24	6				
X6300610	THREE BEAM GUARDRAIL ELEMENT PLATES	EACH	6	5	1				
X6300620	THREE-BEAM MODIFIED BLOCKS	EACH	6	5	1				
X6300630	THREE-BEAM POSTS	EACH	6	5	1				
X6300640	THREE BEAM RADIUS ELEMENT PLATES	EACH	2	1	1				
X6310163	TRAFFIC BARRIER TERMINAL, TYPE 1, NOSE	EACH	7	6	1				
X6310177	TRAFFIC BARRIER TERMINAL, TYPE 3 (SPECIAL)	EACH	2	1	1				
X6310203	TRAFFIC BARRIER TERMINAL, TYPE 3 SPECIAL, NOSE	EACH	2	1	1				
X6330800	GUARDRAIL POST VERTICAL ADJUSTMENT	EACH	12	10	2				
X6331105	STEEL POSTS, MODIFIED	EACH	22	18	4				
X6331110	STEEL POSTS, SPECIAL	EACH	9	7	2				
Z0007124	STEEL RAILING (SPECIAL)	FOOT	25	20	5				

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URBAN

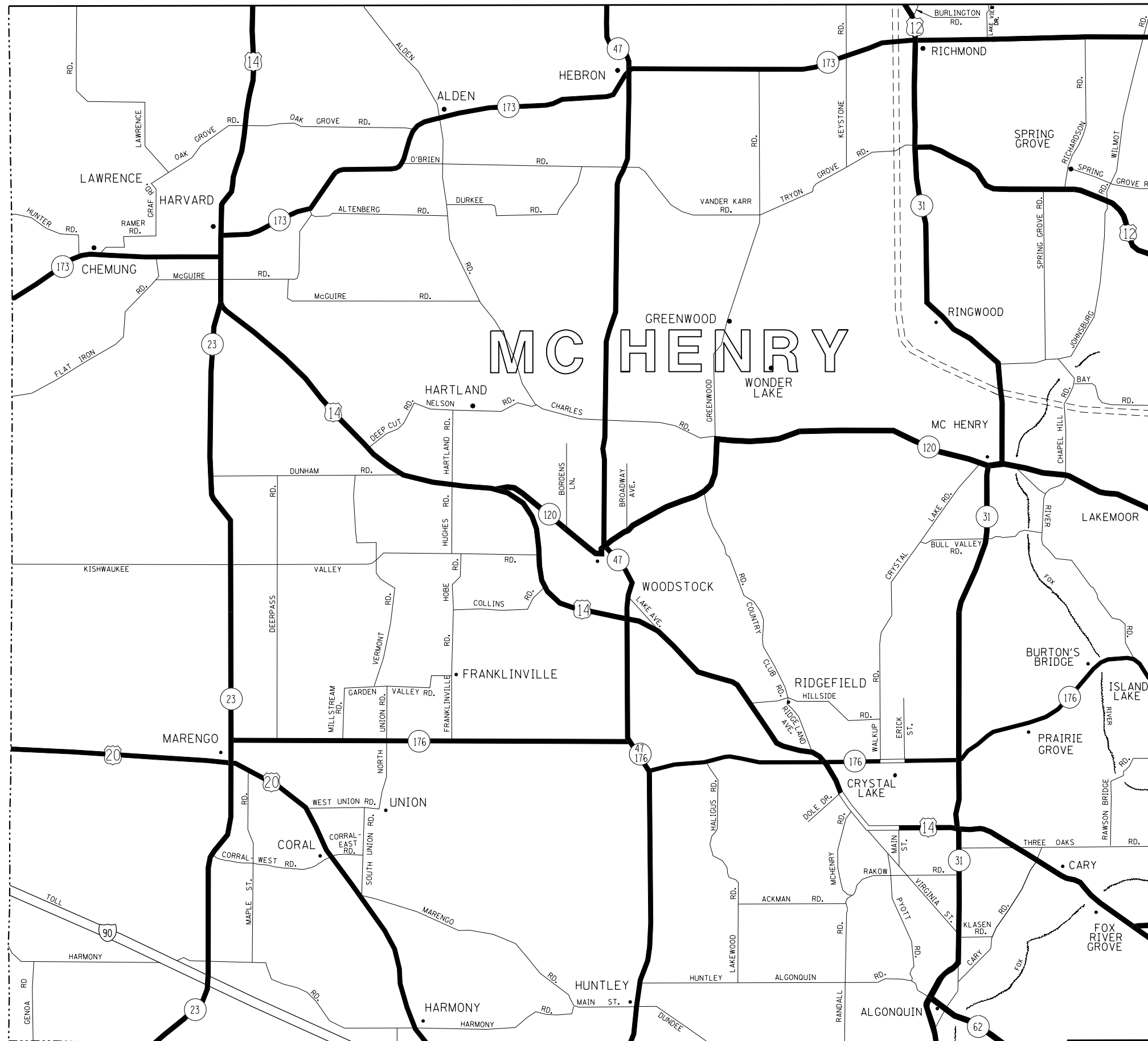
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CODE NO	ITEM	UNIT	TOTAL QUANTITIES	100% STATE 0021	100% MCHD 0021				
Z0029656	REPAIR TRAFFIC BARRIER TERMINAL TYPE 3 SPECIAL	EACH	4	3	1				
Z0029658	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - POST	EACH	208	166	42				
Z0051400	REMOVING AND RESETTING POSTS	EACH	50	40	10				
Z0052100	REPAIR STEEL PLATE BEAM GUARDRAIL, TYPE B	FOOT	99	79	20				
Z0052200	REPAIR STEEL PLATE BEAM GUARDRAIL, TYPE C	FOOT	50	40	10				
Z0052400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	9	7	2				
Z0052550	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1B	EACH	2	1	1				
Z0052600	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	18	14	4				
Z0052900	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 4	EACH	2	1	1				
Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	1	1				
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3	2	1				
Z0059660	REPAIR TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL - RAIL ELEMENT PLATE	EACH	59	47	12				
Z0078000	WOOD RAIL	FOOT	220	176	44				
X2300008	REATTACHING AND REALIGNING TERMINALS AND RAIL ELEMENT PLATES	EACH	20	16	4				

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE						
CODE NO	ITEM	UNIT	TOTAL QUANTITIES						

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FILE NAME =	USER NAME = pyrznowskiro	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A. -	SECTION	COUNTY	TOTAL	SHEET
		CHECKED -	REVISED -			VAR.	2017-027GRR	VARIOUS	29	4
		DATE -	REVISED -			CONTRACT NO. 62F46				
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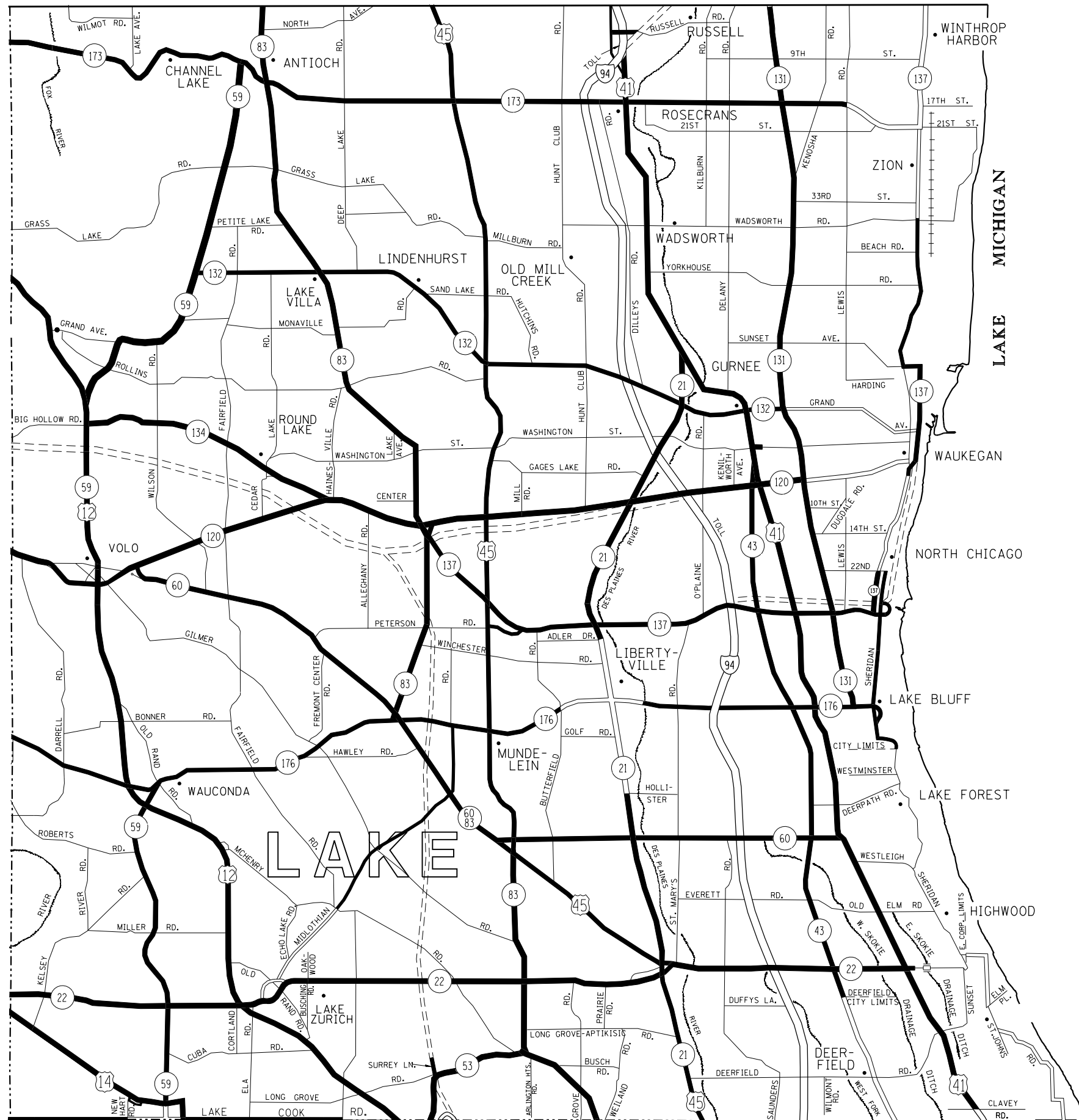
**DISTRICT NO. 1**

**STATE HIGHWAYS & EXPRESSWAYS  
WITHIN STATE JURISDICTION.  
(EXCEPT TOLLWAYS) AND  
CITY MAINTENANCE AGREEMENTS  
UNDER STATE JURISDICTION**

**FUTURE HIGHWAYS**

**VARIOUS AGENCIES HIGHWAYS**

FILE NAME =	USER NAME = pyznowskirb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GUARDRAIL REPAIR LOCATION MAP McHENRY COUNTY</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
						VAR.	2017-027GRR	VARIOUS	29	5	
						CONTRACT NO. 62F46					
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
SCALE:      SHEET NO.      OF SHEETS      STA.      TO STA.											



**DISTRICT NO. 1**

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION**
- FUTURE HIGHWAYS**
- VARIOUS AGENCIES HIGHWAYS**

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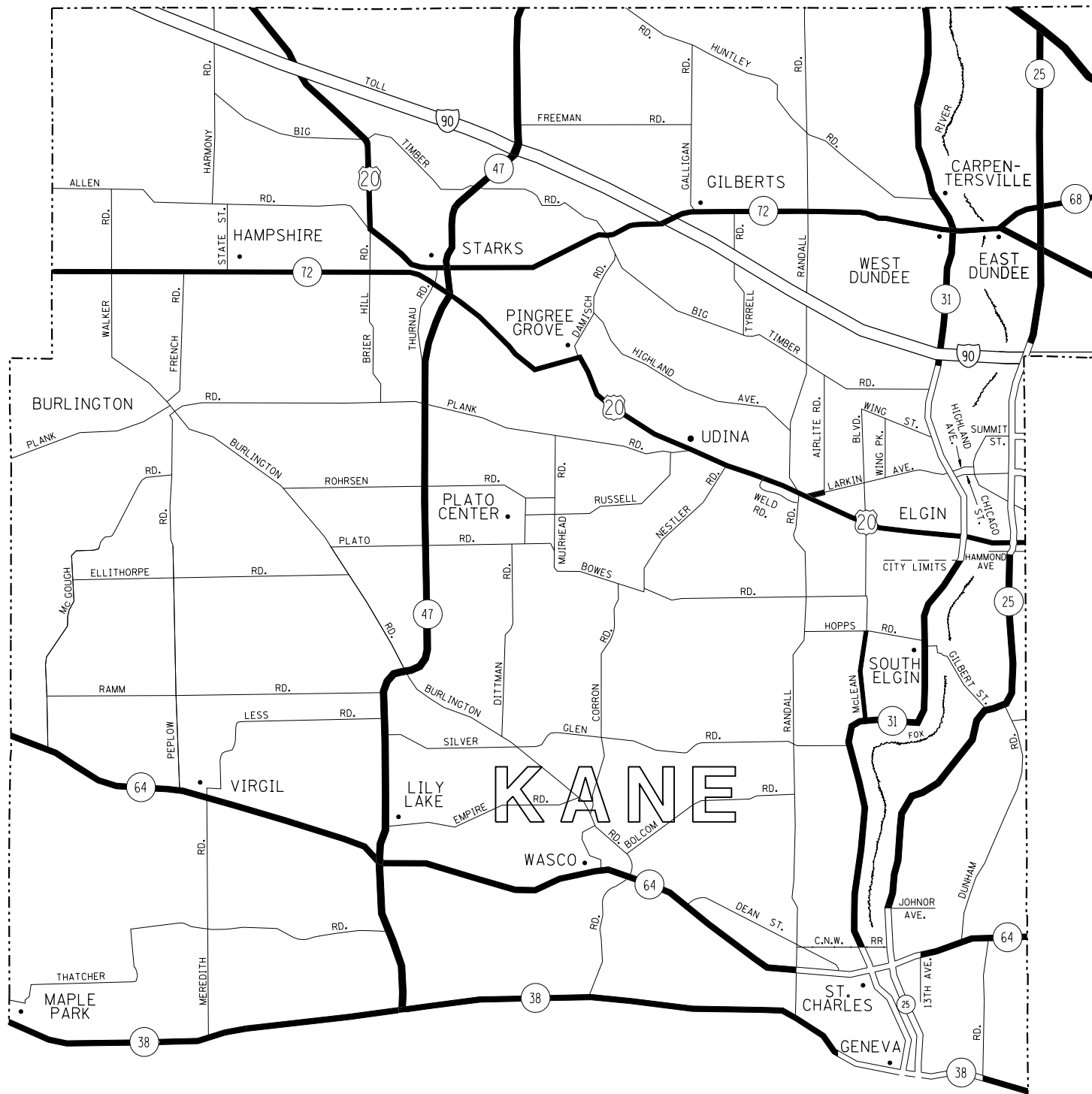
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP  
 LAKE COUNTY**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	6
CONTRACT NO. 62F46				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



### DISTRICT NO. 1

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION**
- FUTURE HIGHWAYS**
- VARIOUS AGENCIES HIGHWAYS**

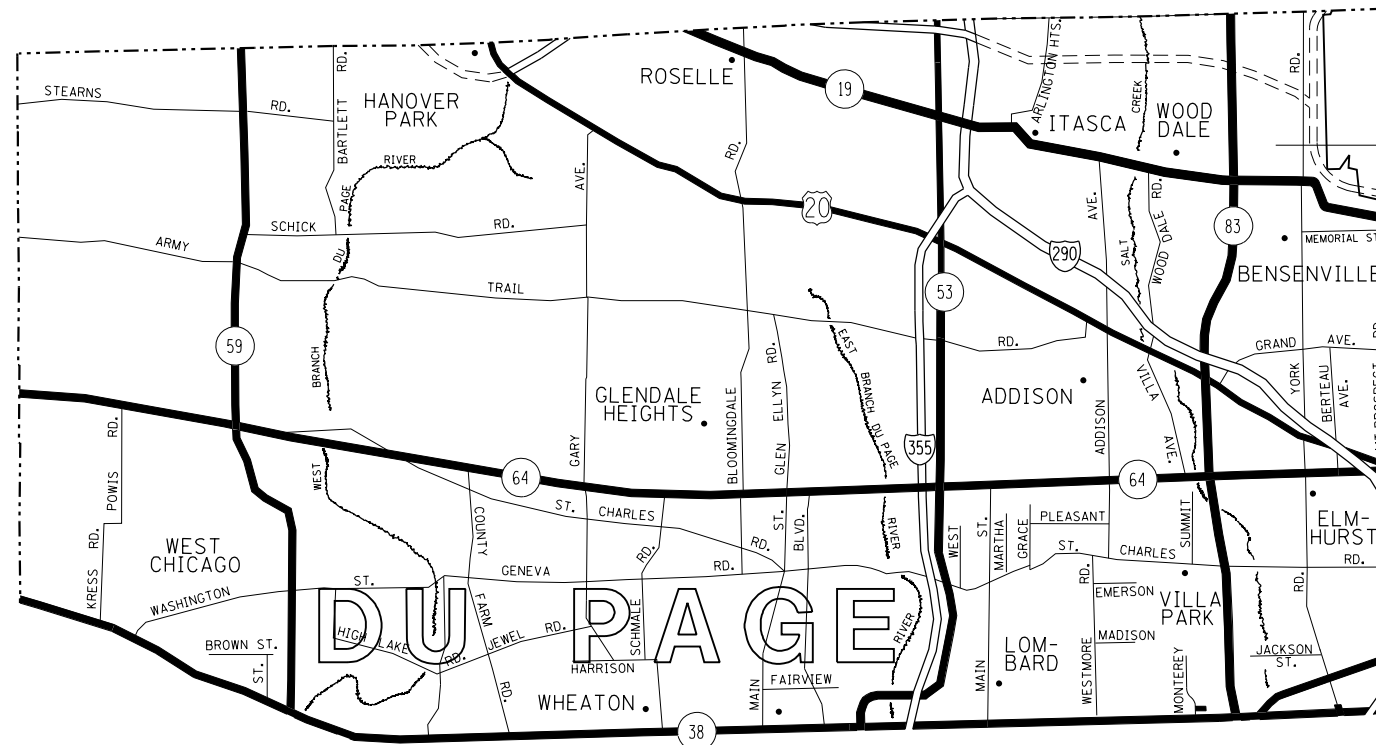
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP KANE COUNTY  
NORTH OF AND INCLUDING IL RTE 38**

SCALE:	SHEET NO.	OF	SHEETS	STA.	TO	STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	7
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 62F46	



**DISTRICT NO. 1**

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
- FUTURE HIGHWAYS
- VARIOUS AGENCIES HIGHWAYS

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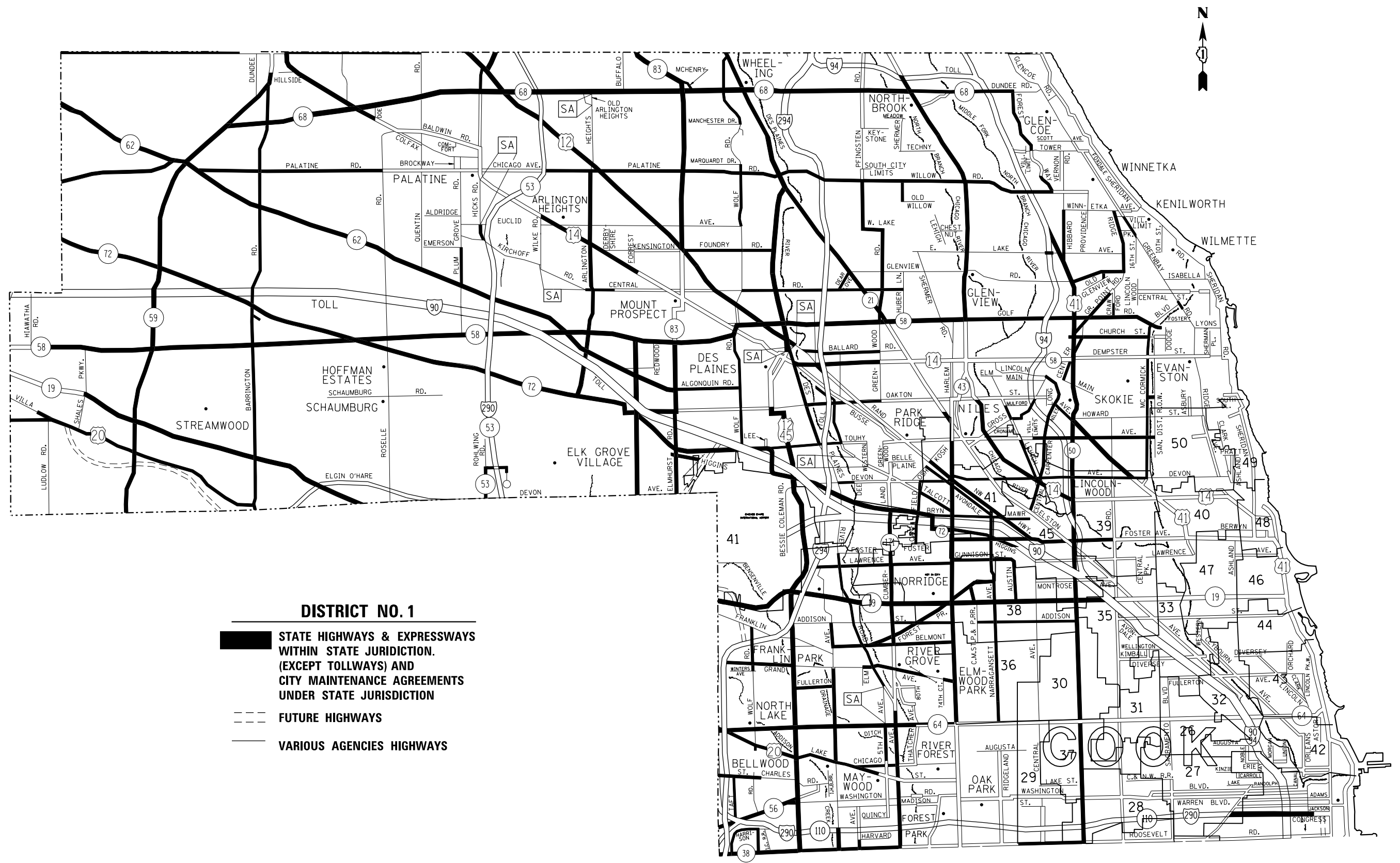
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP DuPAGE COUNTY  
NORTH OF AND INCLUDING IL RTE 38**




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VAR.	2017-027GRR	VARIOUS	29	8
			CONTRACT NO. 62F46	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





**DISTRICT NO. 1**

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-  FUTURE HIGHWAYS
-  VARIOUS AGENCIES HIGHWAYS

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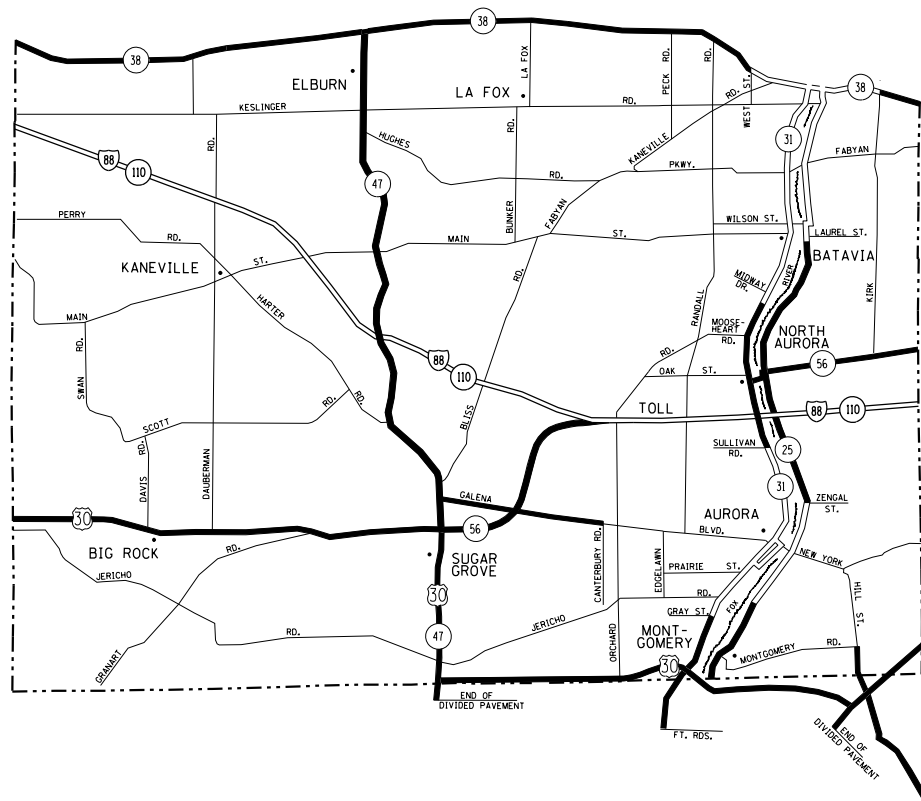
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP COOK COUNTY  
NORTH OF AND INCLUDING IL. RTE 38**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	9
			CONTRACT NO. 62F46	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		





- DISTRICT NO. 1**
- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION, (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION
  - FUTURE HIGHWAYS
  - VARIOUS AGENCIES HIGHWAYS

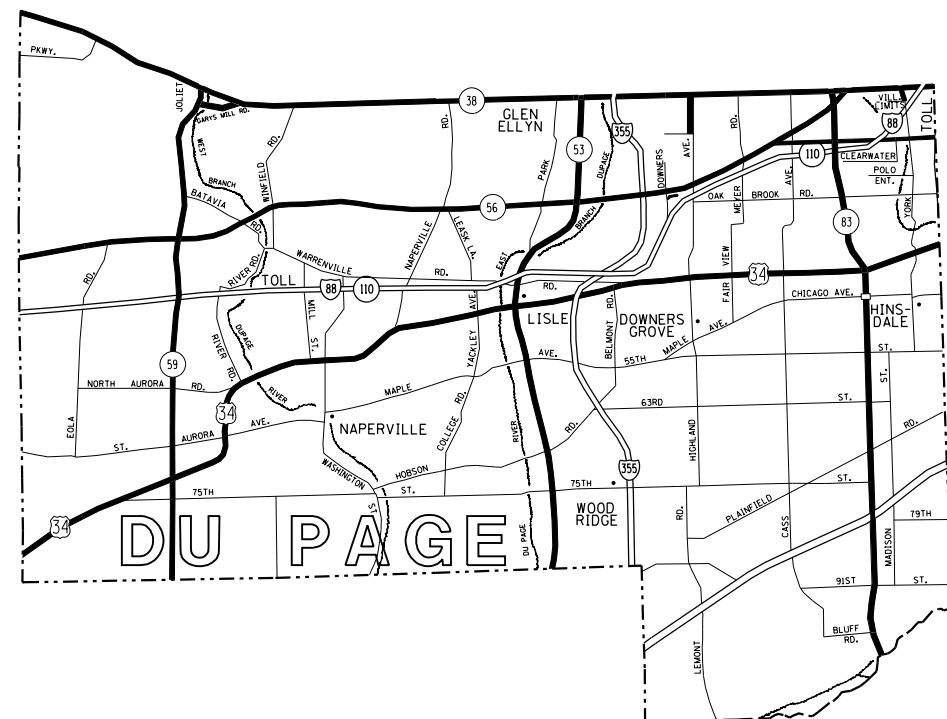
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP KANE COUNTY  
SOUTH OF IL RTE 38**

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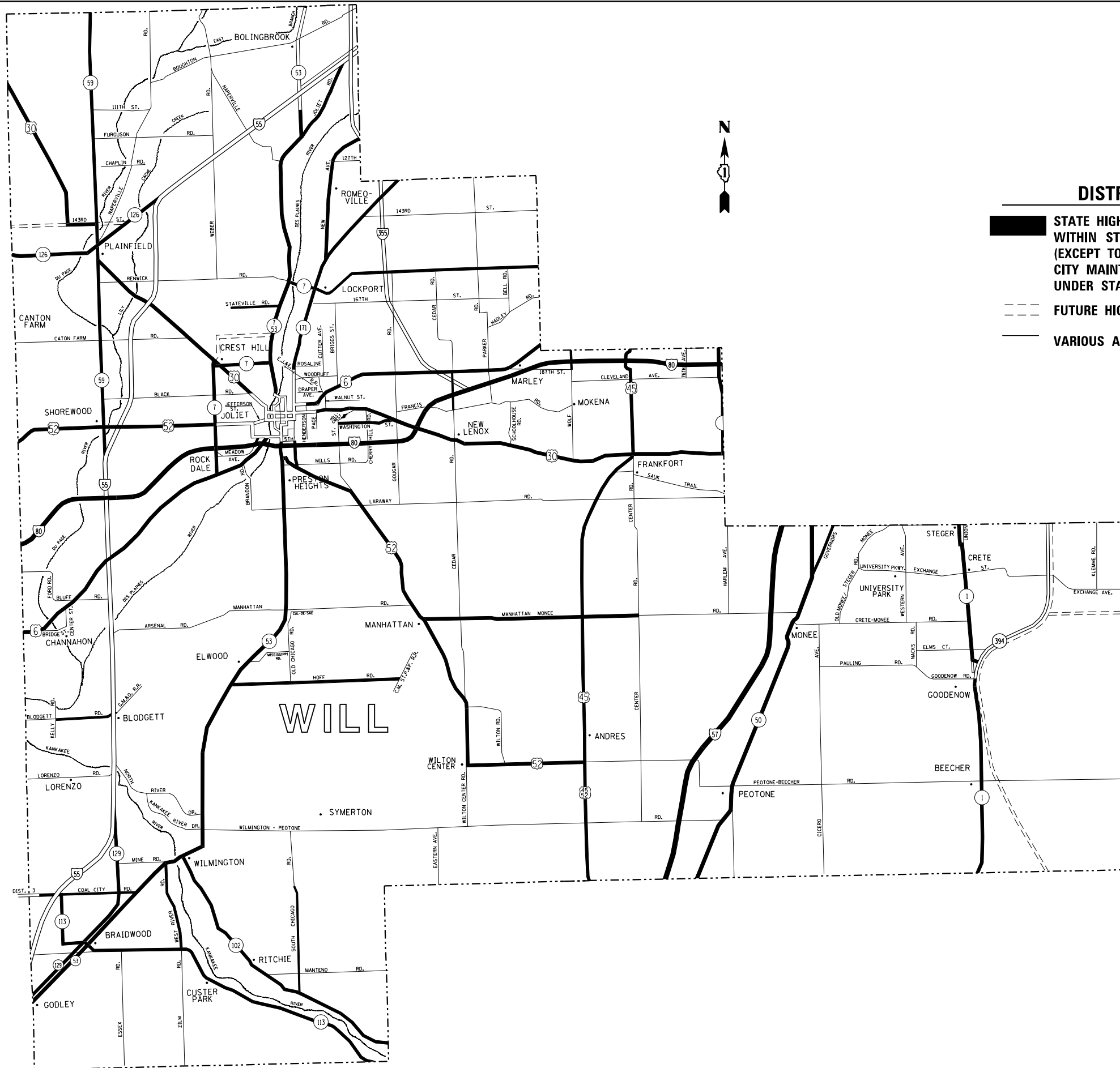
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VAR.	2017-027GRR	VARIOUS	29	11
CONTRACT NO. 62F46				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**DISTRICT NO. 1**

- STATE HIGHWAYS & EXPRESSWAYS  
WITHIN STATE JURISDICTION,  
(EXCEPT TOLLWAYS) AND  
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FILE NAME =		USER NAME = pyzanoskrib		DESIGNED -		REVISED -		<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GUARDRAIL REPAIR LOCATION MAP DuPAGE COUNTY</b>				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 100.0000' / in.		DATE -		REVISED -		REVISED -			SCALE:      SHEET NO.      OF      SHEETS      STA.      TO      STA.				CONTRACT NO. 62F46				
PLOT DATE = 6/28/2017		DATE -		REVISED -		REVISED -			FED. ROAD DIST. NO.      ILLINOIS FED. AID PROJECT								



**DISTRICT NO. 1**

- STATE HIGHWAYS & EXPRESSWAYS WITHIN STATE JURISDICTION. (EXCEPT TOLLWAYS) AND CITY MAINTENANCE AGREEMENTS UNDER STATE JURISDICTION**
- FUTURE HIGHWAYS**
- VARIOUS AGENCIES HIGHWAYS**

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PLOT DATE = 6/28/2017	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GUARDRAIL REPAIR LOCATION MAP  
WILL COUNTY**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	13
			CONTRACT NO. 62F46	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

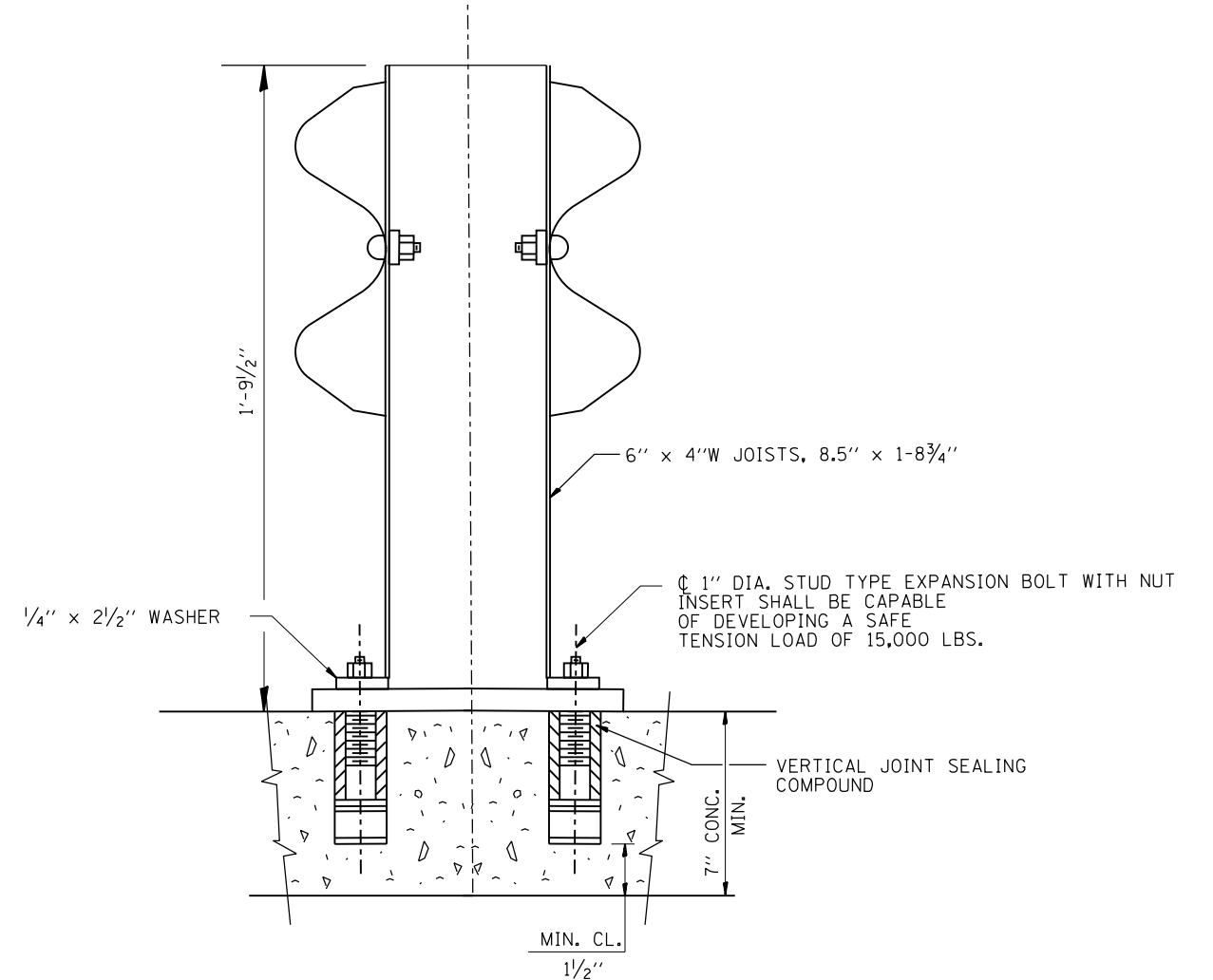
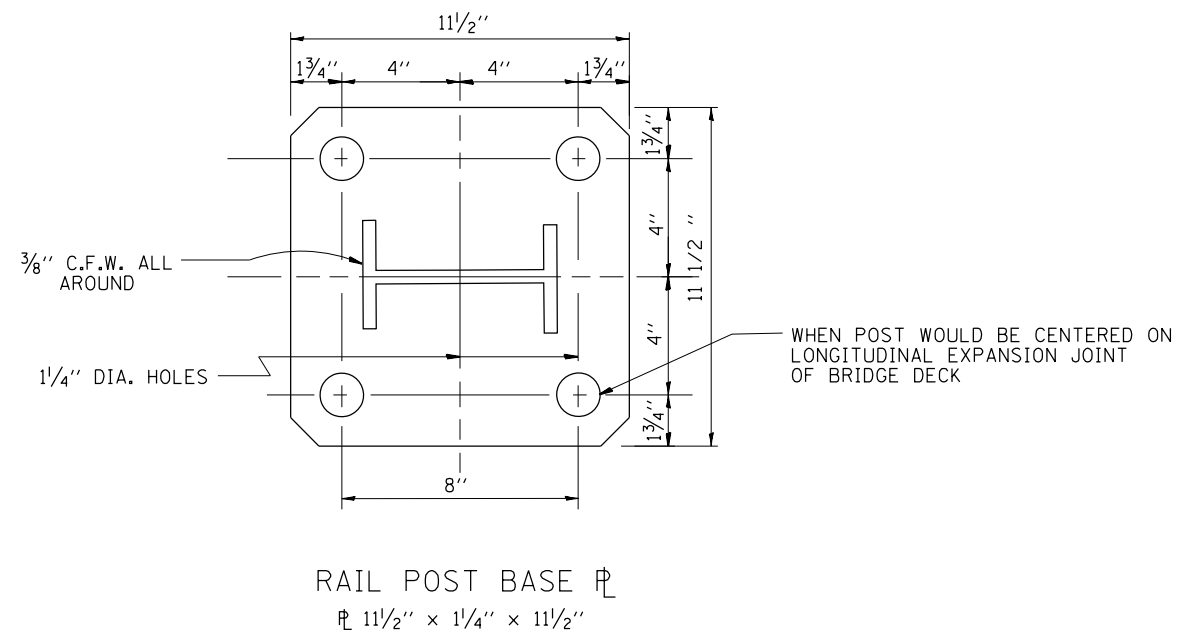
NOTE:  
 FOR DETAILS OF RAIL ELEMENTS, RAIL SPLICING, NUT, BOLT AND SIDE VIEW OF RAIL, SEE STANDARD 2230-2.

ALL WELDS SHALL BE GROUND SMOOTH

POSTS SHALL BE CUT AND WELDED TO THE BASE PLATE SO THAT THE POST WILL BE PLUMB WHEN ERECTED.

TWO PERCENT (2%) OF ALL ANCHOR BOLTS SHALL BE TEST LOADED IN PLACE, MINIMUM TEST LOAD=8 KIPS. IF ONE ANCHOR BOLT FAILS DURING THE TEST, TWO OTHER ANCHOR BOLTS SHALL BE TESTED. TESTING EQUIPMENT SHALL BE BOLT COMPANIES.

PROVIDE 1/8" AND 2/16" GALVANIZED SHIMS FOR 25% OF THE POSTS.



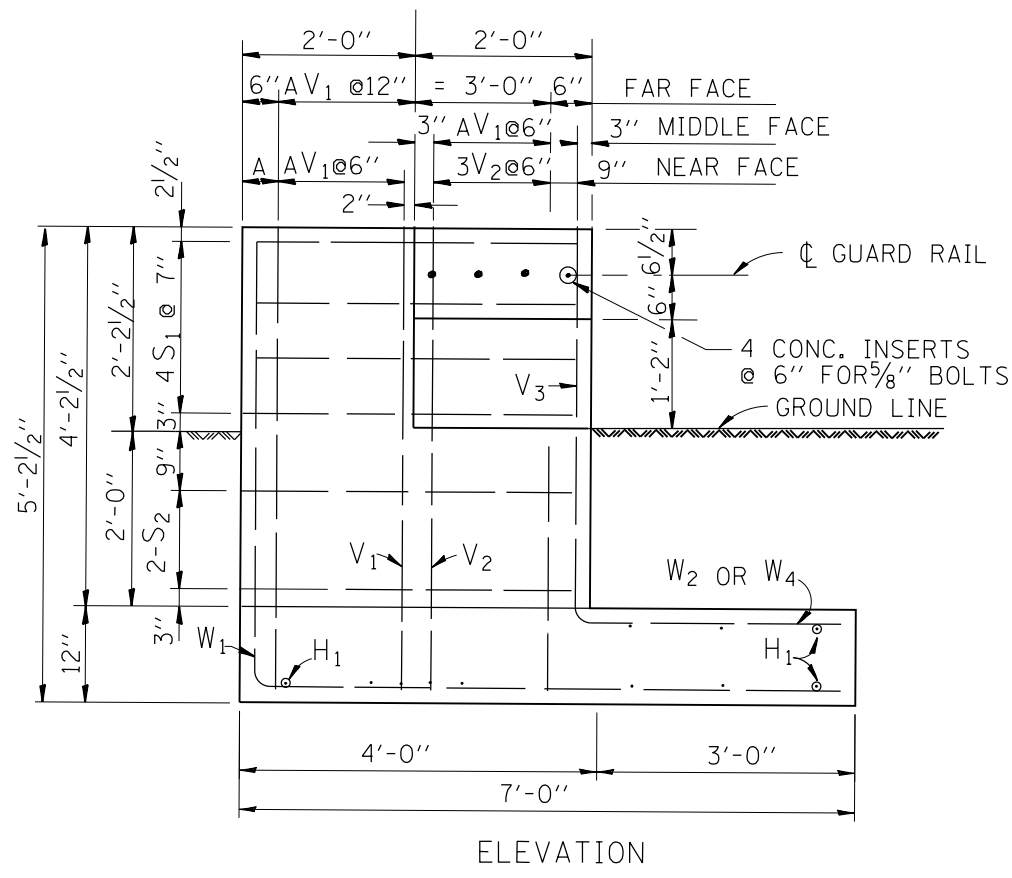
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		DATE - 10-31-88	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

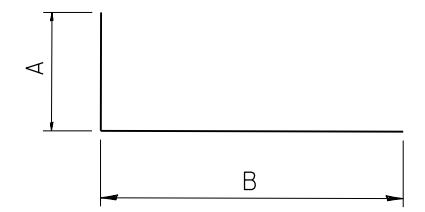
ANCHOR DETAIL FOR STEEL PLATE BEAM  
 GUARDRAIL ON CONCRETE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

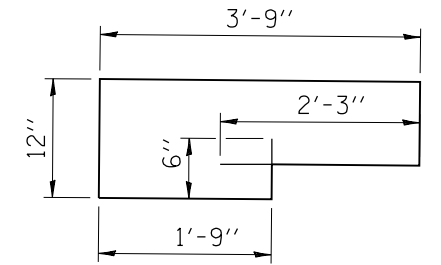
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	14
BM-02		CONTRACT NO. 62F46		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



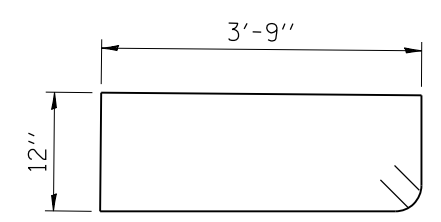
ELEVATION



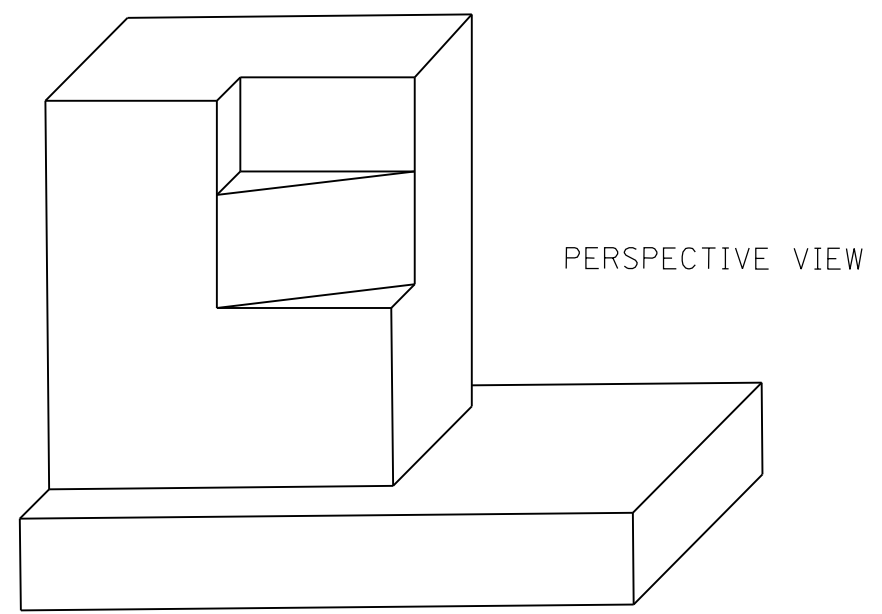
BAR	A	B	A+B
V <sub>1</sub>	4'-8"	6"	5'-2"
V <sub>2</sub>	2'-6"	6"	3'-0"
W <sub>1</sub>	4'-8"	6'-6"	11'-2"
W <sub>2</sub>	2'-0"	3'-0"	5'-0"
W <sub>4</sub>	4'-2"	3'-0"	7'-2"



S<sub>1</sub> BAR

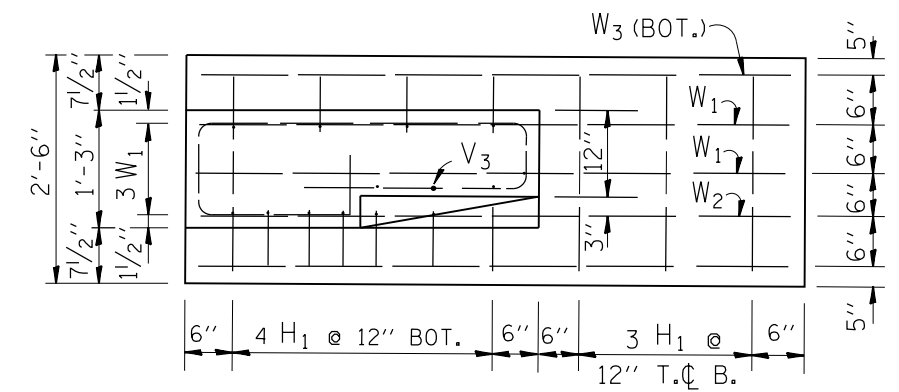


S<sub>2</sub> BAR



PERSPECTIVE VIEW

NOTES: CLASS X CONCRETE SHALL BE USED THROUGHOUT  
REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED

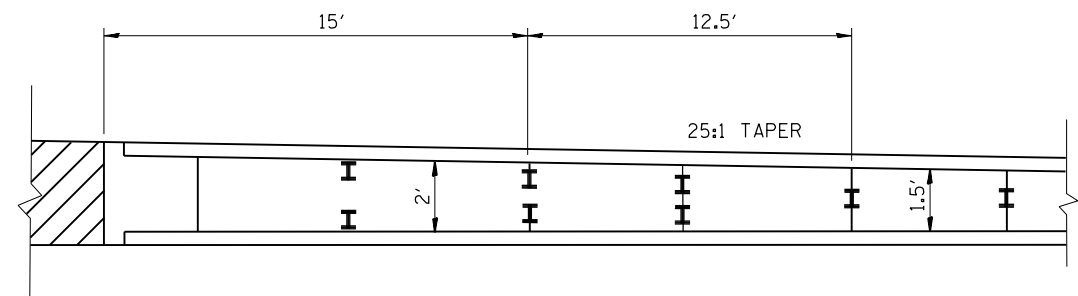
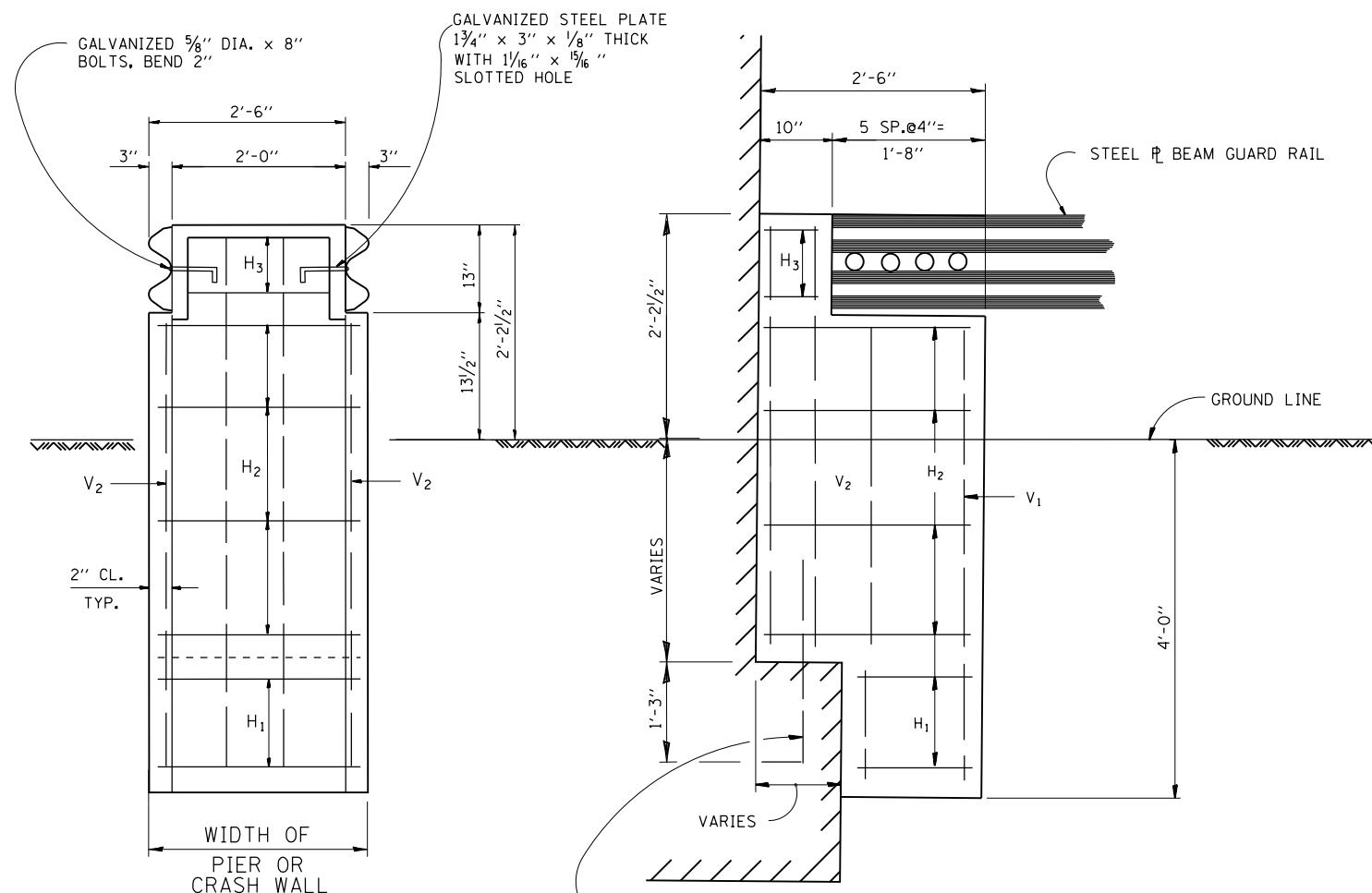


FOOTING PLAN

BAR SCHEDULE

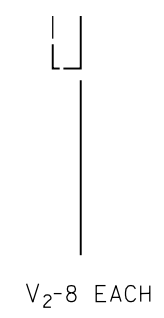
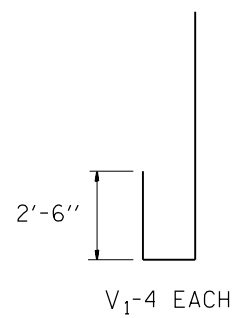
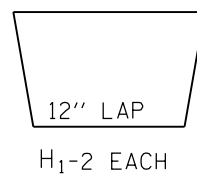
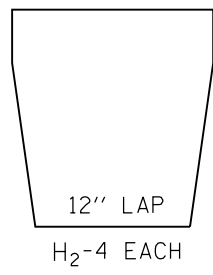
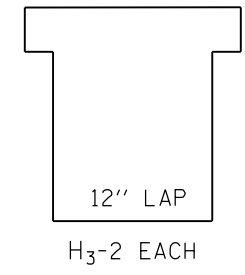
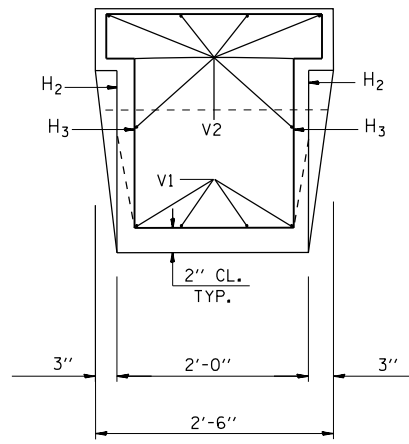
BAR	NO.	LENGTH
V <sub>1</sub>	8	5'-2"
V <sub>2</sub>	3	3'-0"
V <sub>3</sub>	4	3'-0"
W <sub>1</sub>	3	11'-2"
W <sub>2</sub>	1	5'-0"
W <sub>3</sub>	2	6'-6"
W <sub>4</sub>	2	7'-2"
S <sub>1</sub>	4	10'-0"
S <sub>2</sub>	2	10'-0"
H <sub>1</sub>	1	2'-3"

THIS SHEET IS FOR INFORMATION ONLY



GUARD RAIL TRANSITIONS

NOTES: CLASS X CONCRETE SHALL BE USED THROUGHOUT REINFORCEMENT TO BE SIZE #4 UNLESS OTHERWISE NOTED



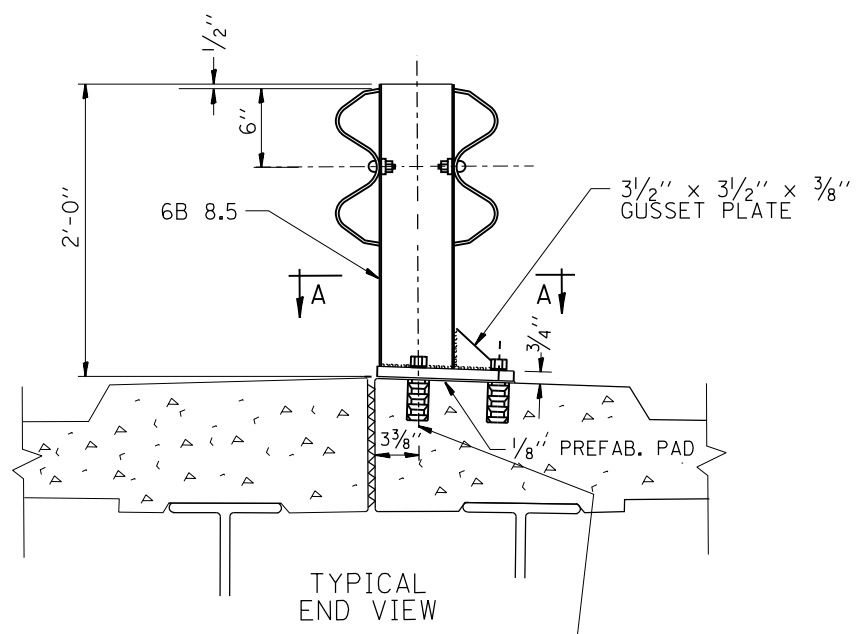
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		DATE - 10-31-88	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

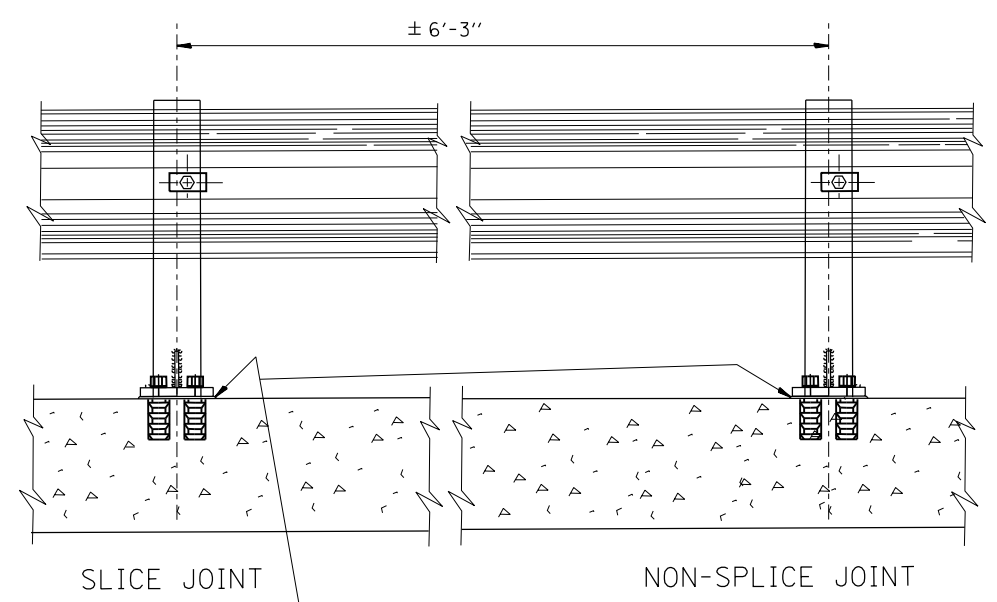
TYPICAL DETAILS FOR STEEL PLATE BEAM GUARDRAIL ANCHORAGE REPAIR			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	16
BM-04		CONTRACT NO. 62F46		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

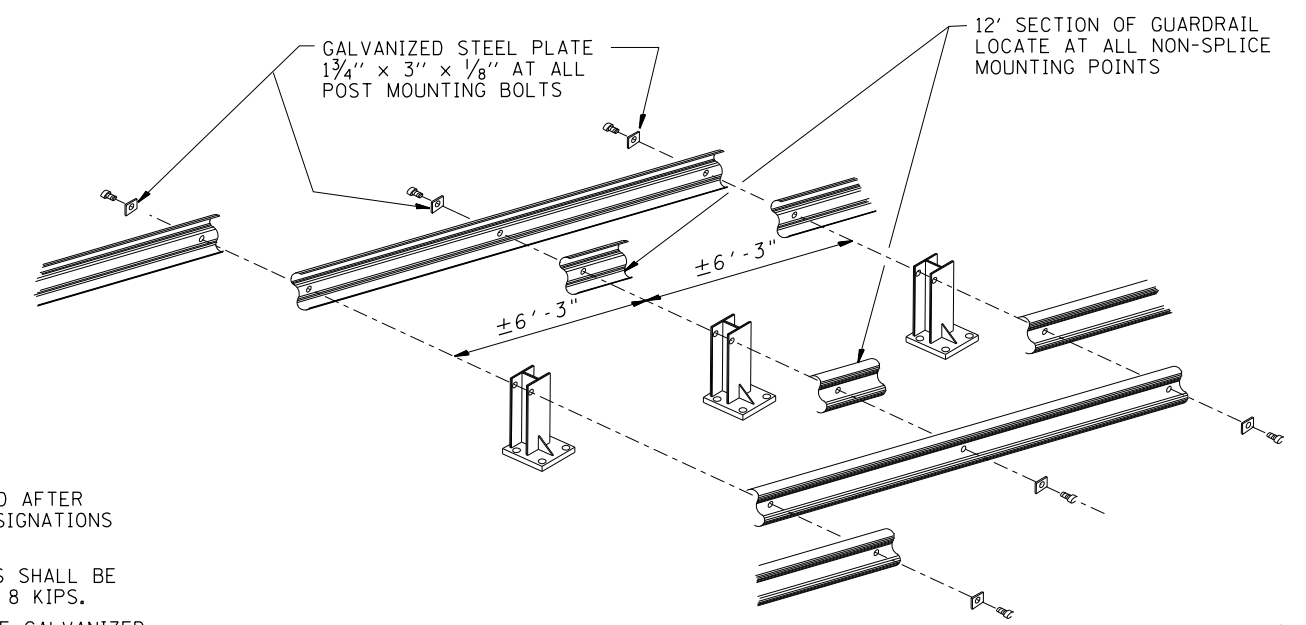




7/8" GALVANIZED ANCHOR BOLTS AND SELF DRILLING EXPANSION SHELLS OR MULTI UNIT TYPE ANCHORS  
1/8" HOLES THRU BASE PLATE

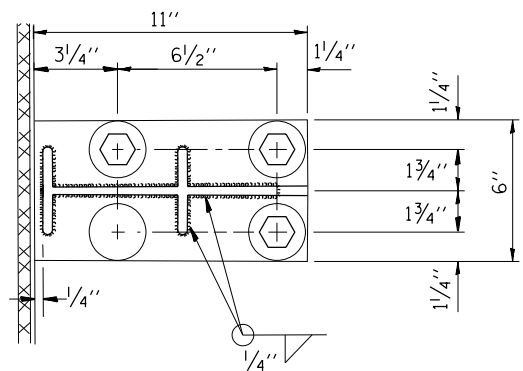


SEAL PERIMETER OF BASE OF POST TO MEDIAN WITH TWO COMPONENT NON-STAINING GRAY SEALING COMPOUND WITH POLYSULFIDE LIQUID POLYMERS - GUN GRADE WITH PRIMER



NOTE:

DIAMOND TIPPED DRILL SHALL BE USED TO DRILL THRU REINFORCEMENT BARS



SEC. A-A

NOTE:

POSTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM DESIGNATIONS A-123 AND A-385.

TWO PERCENT (2%) OF ALL ANCHOR BOLTS SHALL BE TEST LOADED IN PLACE. MIN. TEST LOAD = 8 KIPS.

ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION A-153.

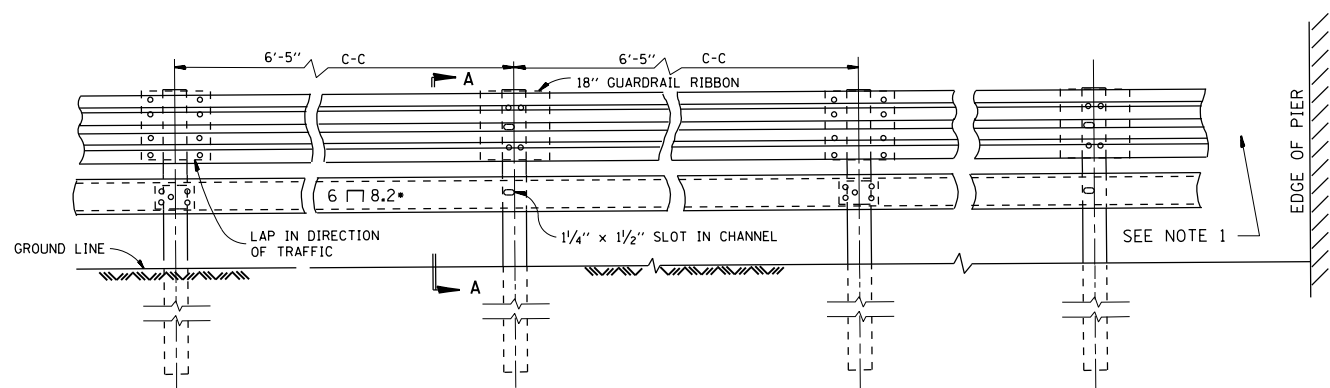
FOR MATERIAL COMPOSITION OF PREFABRICATED PAD, SEE ARTICLE 54.9(F), (BEARING AND ANCHORAGE), OF THE STANDARD SPECIFICATIONS.

PROVIDE 1-1/8" AND 2-1/16" GALVANIZED STEEL SHIMS FOR 25% OF THE POSTS.

IF ONE ANCHOR BOLT FAILS DURING TEST, TWO OTHER ANCHOR BOLTS SHALL BE TESTED. TESTING EQUIPMENT CAN BE OBTAINED FROM BOLT COMPANIES.

THIS SHEET IS FOR INFORMATION ONLY

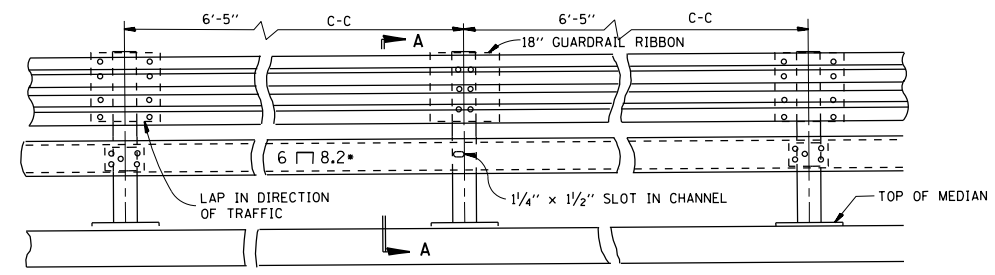
FILE NAME =	USER NAME = pyrzenowskirb	DESIGNED -	REVISED - R. RITCHIE 05-02-00	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL DETAIL FOR CENTER LONGITUDINAL JOINT GUARDRAIL JOINT</b>			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\014478\Browns\Design\014716-sht-plan.dgn		CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR.	2017-027GRR	VARIOUS	29	17
		PLOT SCALE = 100.0000' / in.	REVISED -							<b>BM-05</b>	<b>CONTRACT NO. 62F46</b>		
		PLOT DATE = 6/28/2017	REVISED -							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



ELEVATION

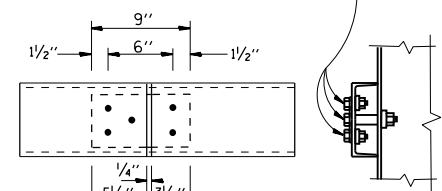
DETAIL OF END SECTION

NOTE 1:  
FOR DETAILS OF GUARDRAIL END ANCHORAGE  
AT PIERS, SEE SHEET NO. \_\_\_\_\_

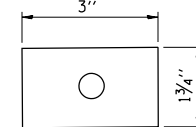


ELEVATION

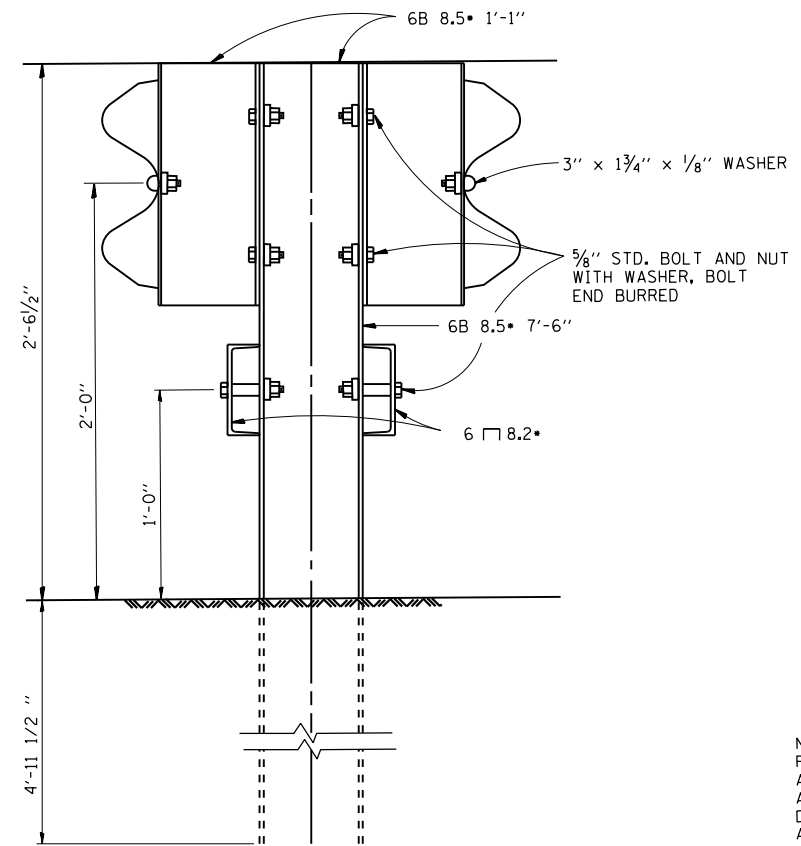
5/8" STD. BOLT AND NUT  
WITH WASHER, BOLT  
END BURRED



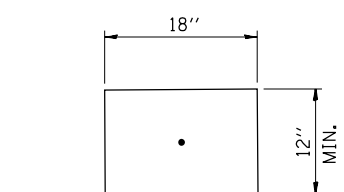
CHANNEL SPLICE  
PLATE 8 3/4" x 4 1/2" x 1/4"



WASHER  
PLATE 3" x 1 3/4" x 1/8"

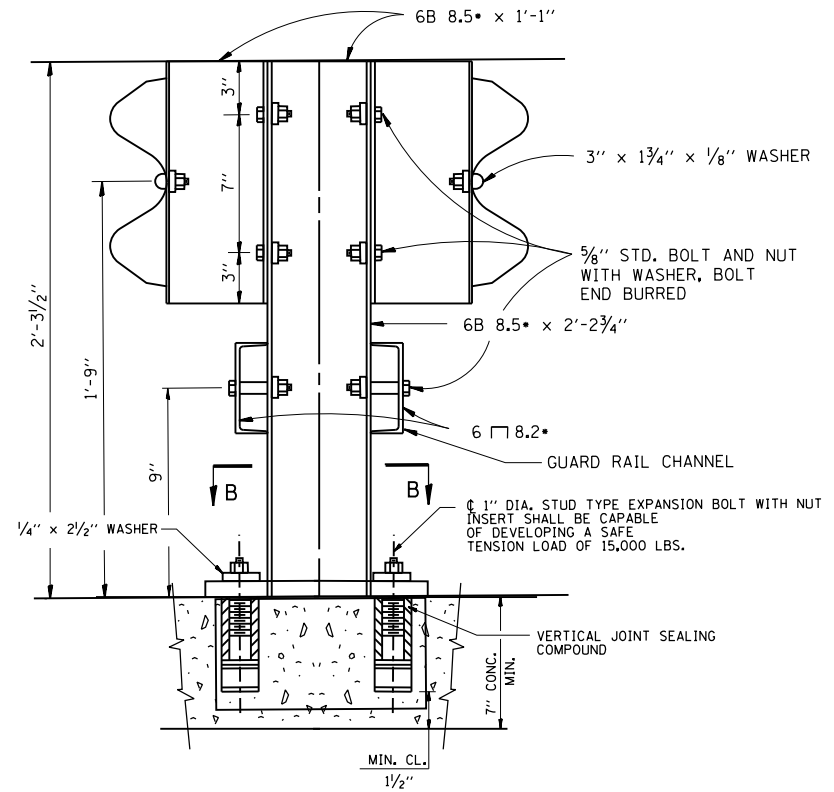


SECTION A-A



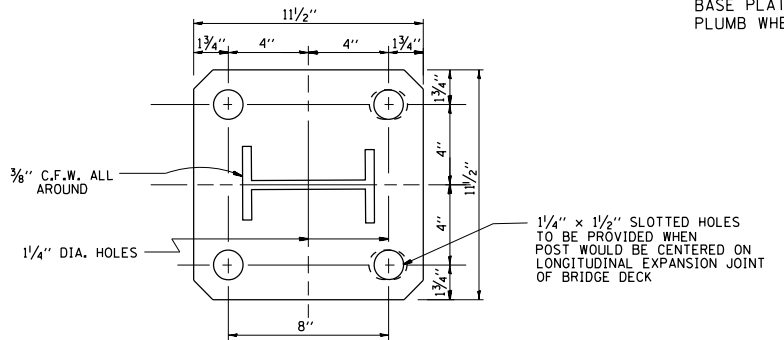
18" GUARDRAIL ELEMENT SPLICE

NOTE:  
FOR DETAIL OF RAIL ELEMENT, RAIL SPLICING, BOLT,  
AND NUT, SEE STATE STANDARD 2230.  
A 1 5/8" x 3" x 1/8" STEEL PLATE WASHER AS SHOWN ON THIS  
DRAWING SHALL BE PLACED BETWEEN THE BOLT HEAD  
AND THE GUARDRAIL RIBBON AT ALL MOUNTING POINTS.  
AN 18" PIECE OF GUARDRAIL RIBBON SHALL BE INSERTED  
BETWEEN THE CONTINUOUS RIBBON AND THE POST AT  
NON-SLICE MOUNTING POINTS.  
RAIL, CHANNELS, POSTS, BASE PLATES, FASTENINGS,  
AND ALL OTHER EXPOSED ACCESSORIES SHALL BE  
GALVANIZED.



SECTION A-A  
ANCHORAGE DETAIL

NOTE:  
ALL WELDS SHALL BE GROUND SMOOTH.  
POSTS SHALL BE CUT AND WELDED TO THE  
BASE PLATE SO THAT THE POSTS WILL BE  
PLUMB WHEN ERECTED.

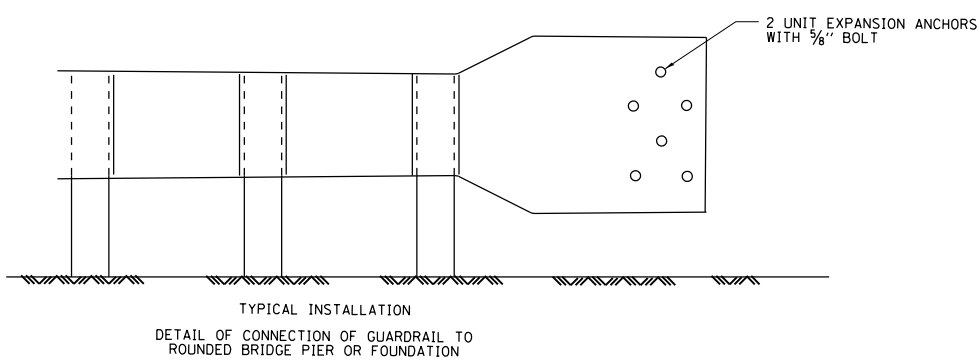
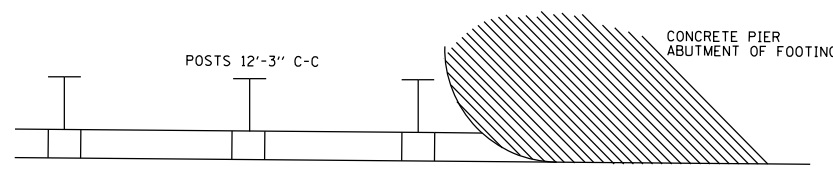
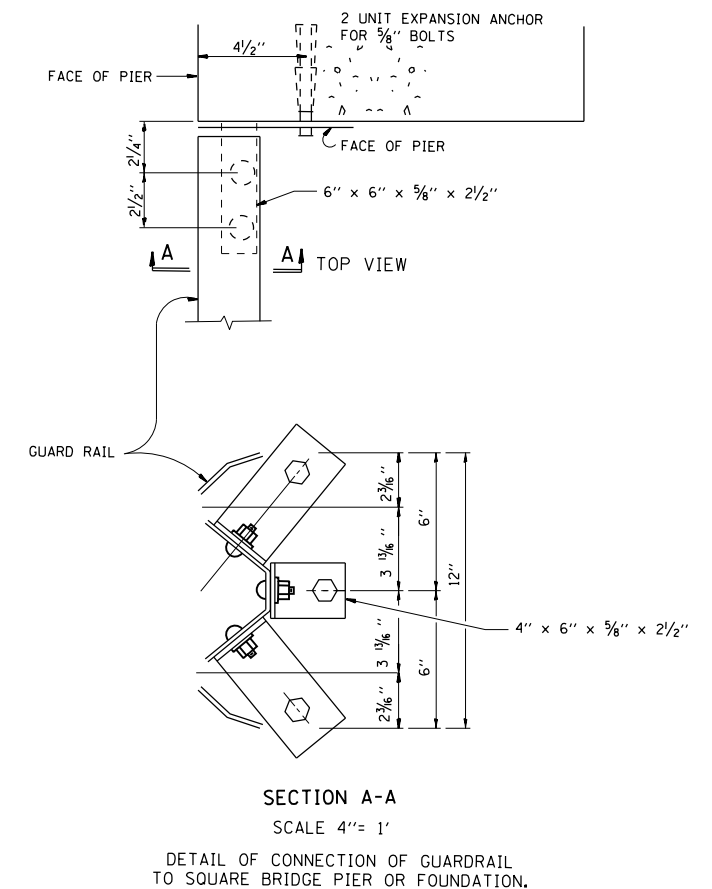
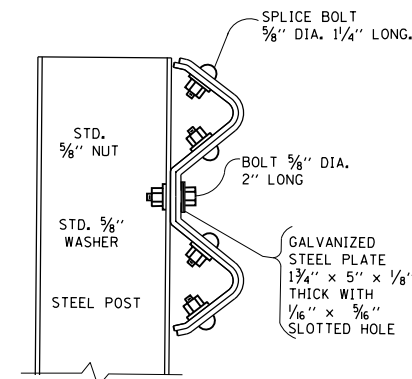
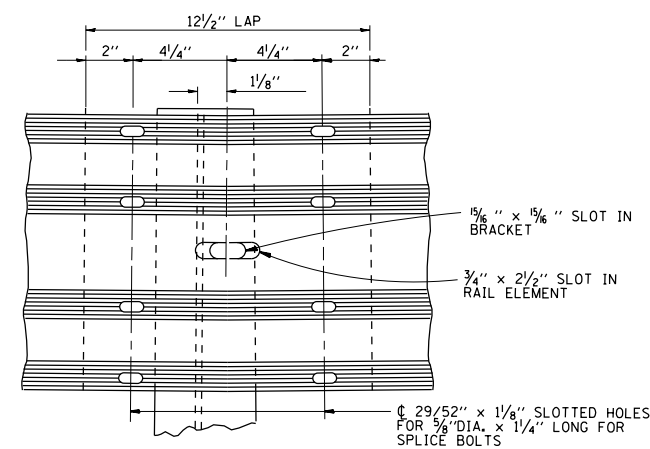
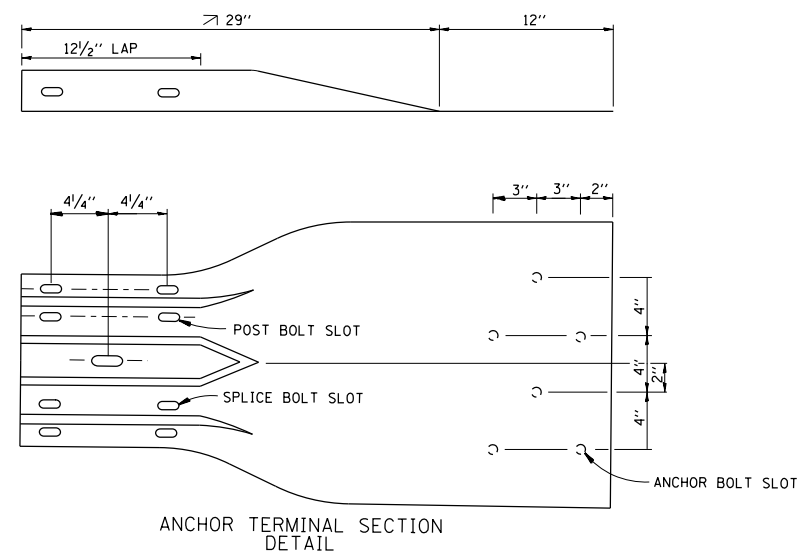


RAIL POST BASE PLATE  
R 1 1/2" x 1 1/4" x 1 1/2"

SECTION B-B

THIS SHEET IS FOR INFORMATION ONLY

FILE NAME =	USER NAME = pyrzezowski	DESIGNED -	REVISED - R. RITCHIE 05-02-00	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STEEL PLATE BEAM GUARDRAIL SPECIAL</b>			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw\11084EBIDINTEG.illinois.gov\PIWIDOT\Documents\DOT Offices\District 1\Projects\01447\Drawings\Design\01447-14716-sht-plan.dgn		CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	VAR.	2017-027GRR	VARIOUS	29	18
		PLOT SCALE = 100.0000' / 1"	REVISED -							BM-06			
		PLOT DATE = 6/28/2017	REVISED -										
								CONTRACT NO. 62F46		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



THIS SHEET IS FOR INFORMATION ONLY

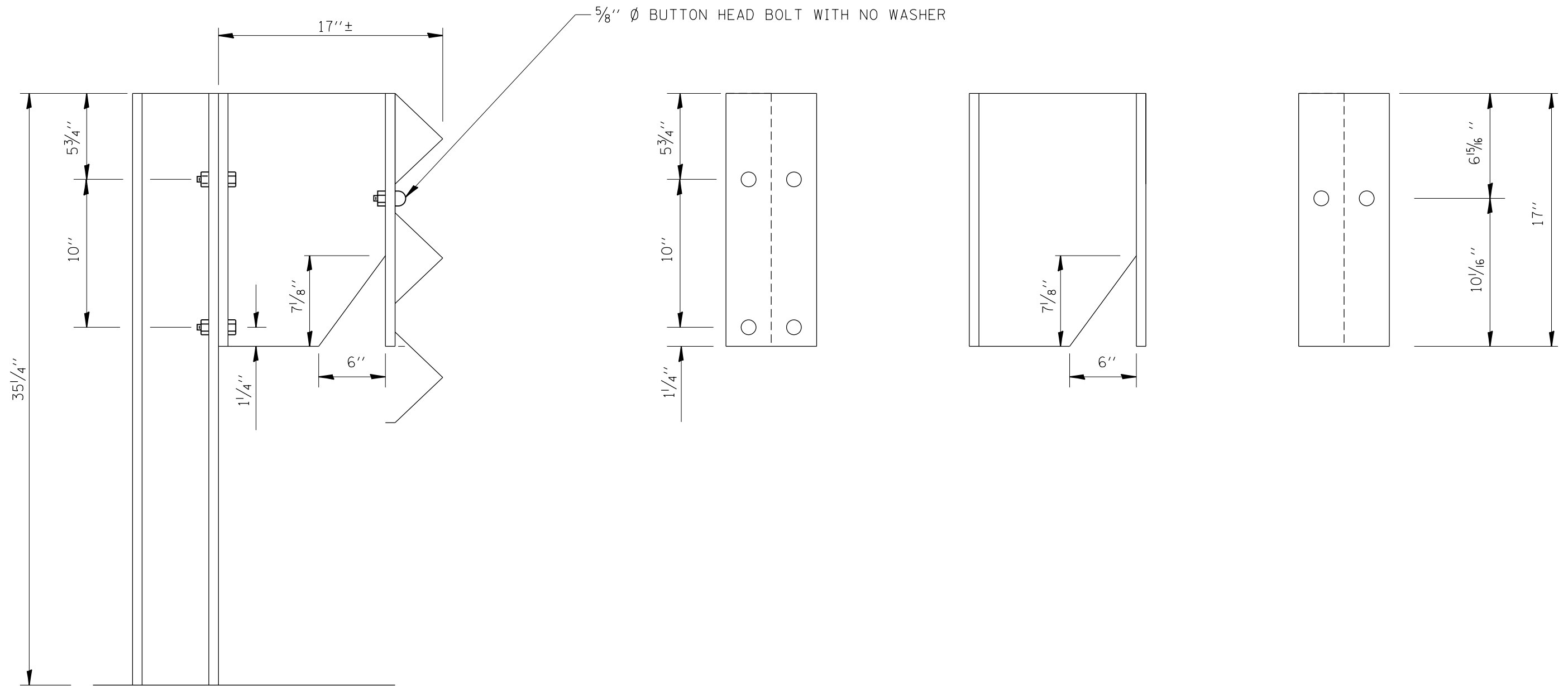
FILE NAME =	USER NAME = pyrzenowski	DESIGNED -	REVISED - R. RITCHIE 05-02-00
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		DATE - 10-31-88	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETAIL OF GUARDRAIL SUPPORT  
AND END ANCHORAGE

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	19
	BM-07		CONTRACT NO. 62F46	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



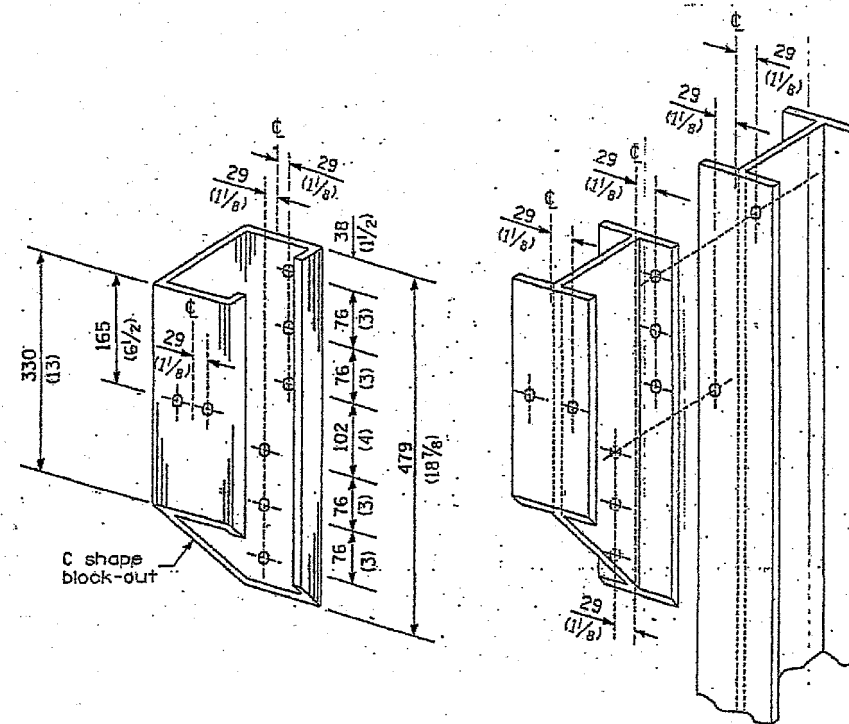
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	PLOT SCALE = 100.0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 6/28/2017	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETAIL THREE BEAM GUARDRAIL  
WITH MODIFIED OFFSET BLOCK**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	20
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 62F46	



STEEL BLOCK-OUT AND  
STEEL POST DETAILS

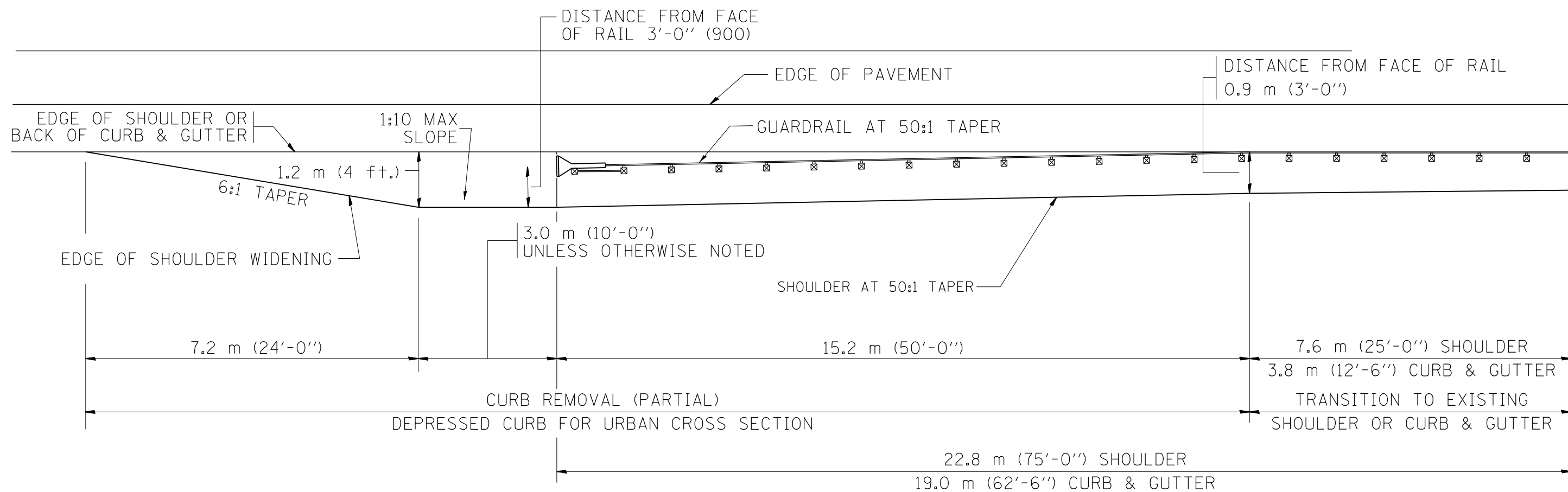
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Default	PLOT DATE = 6/28/2017	DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STEEL PLATE BEAM GUARDRAIL**  
**STEEL BLOCK-OUT DETAIL**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	21
CONTRACT NO. 62F46			ILLINOIS FED. AID PROJECT	

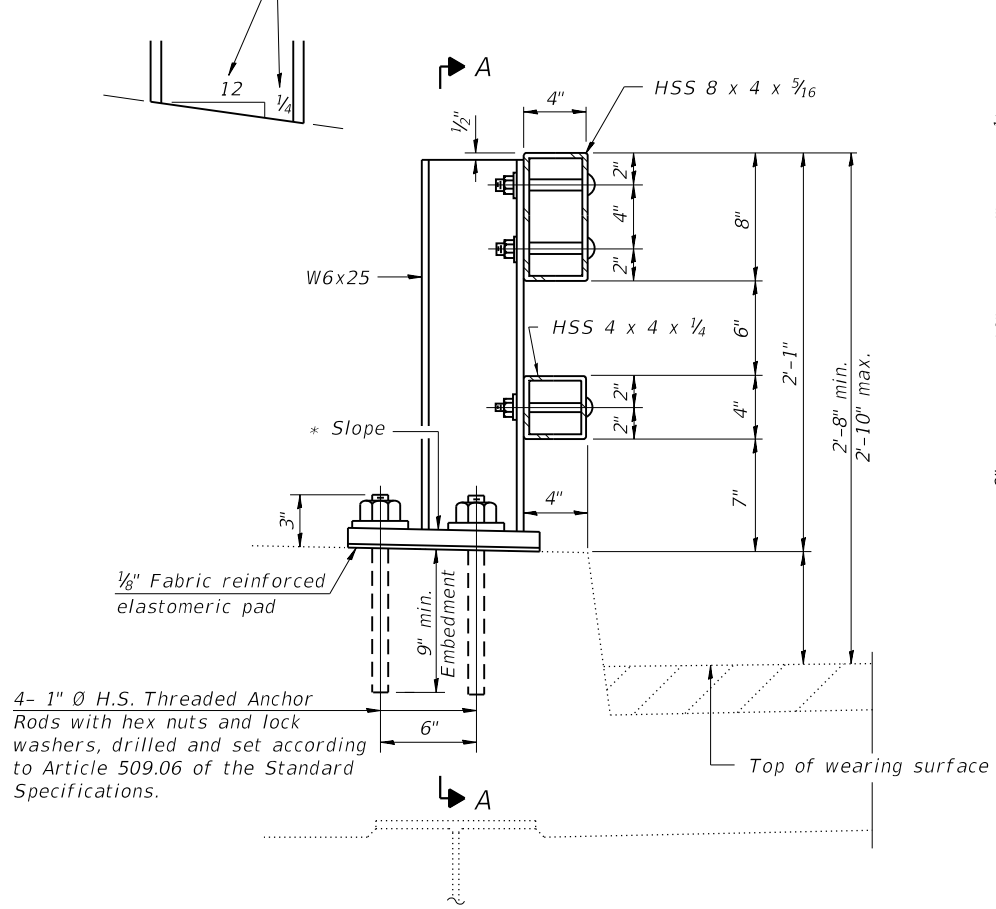


NOTES: THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

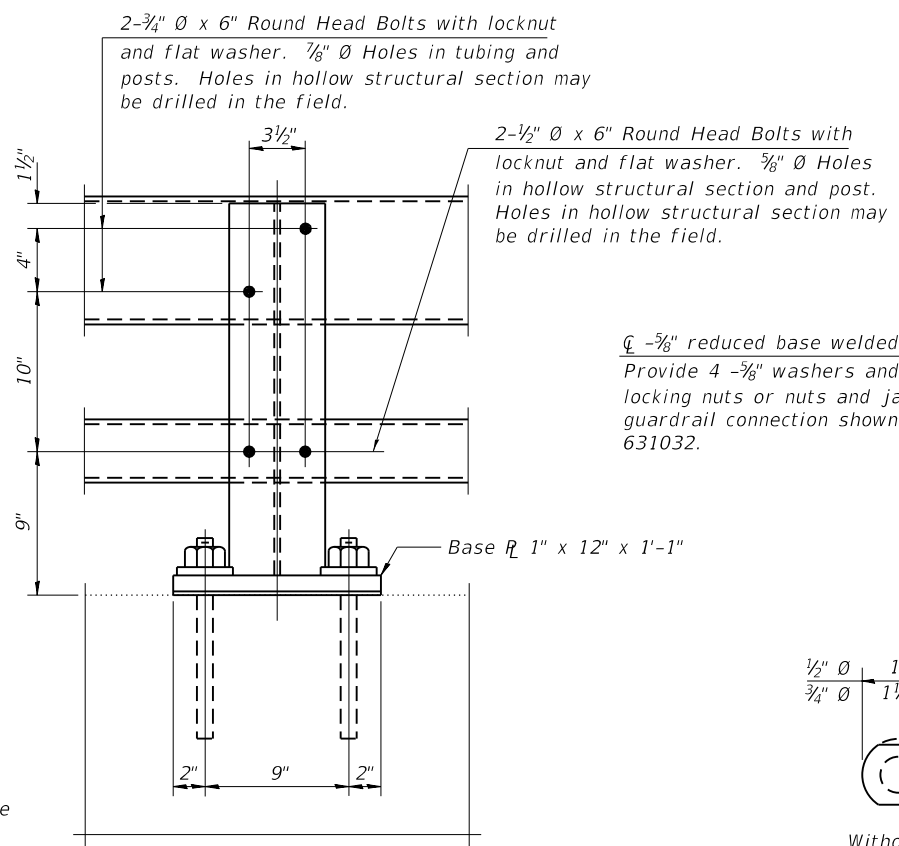
SHOULDER WIDENING SHALL BE IN ACCORDANCE WITH STATE STANDARD 630301

FILE NAME =	USER NAME = pyzzenowskirb	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CURB REMOVAL (PARTIAL) FOR TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw:\IL\084EBIDINTEG\illinois.gov\PWIDOT\Documents\IDOT Offices\District 1\Projects\D14476\Drawings\Design\D144716-sht-plan.dgn	DATE = 6/28/2017	CHECKED -	REVISED -			VAR.	2017-027GRR	VARIOUS	29	22	
Default	PLOT SCALE = 100.0000' / 1in.	DATE -	REVISED -			CONTRACT NO. 62F46		ILLINOIS FED. AID PROJECT			
						SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

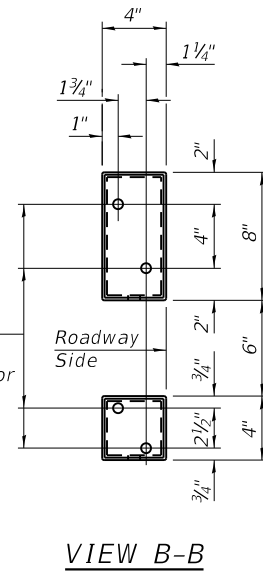
\* Cut bottom end of post to curb slope.



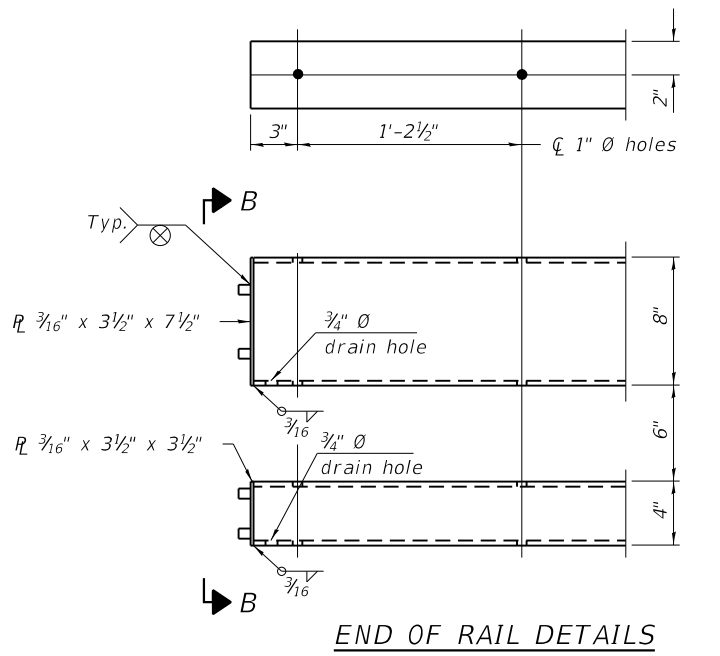
SECTION AT RAIL POST



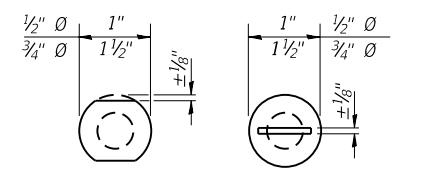
SECTION A-A



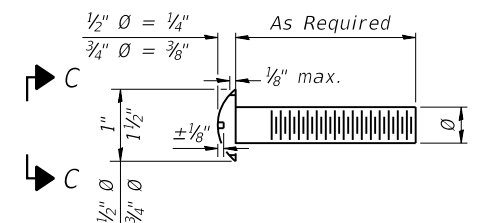
VIEW B-B



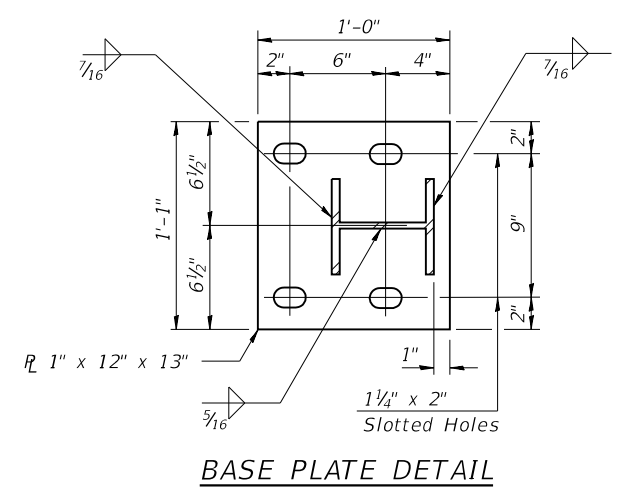
END OF RAIL DETAILS



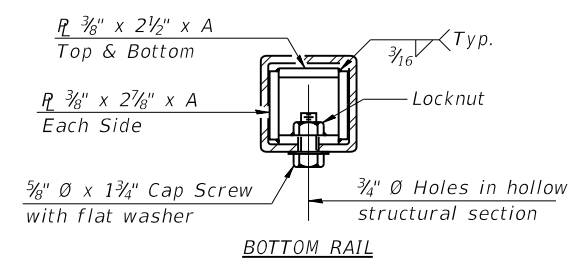
VIEW C-C



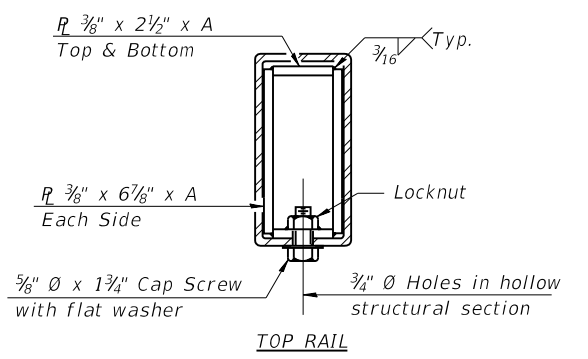
DETAIL OF 1/2" Ø & 3/4" Ø ROUND HEAD BOLTS



BASE PLATE DETAIL

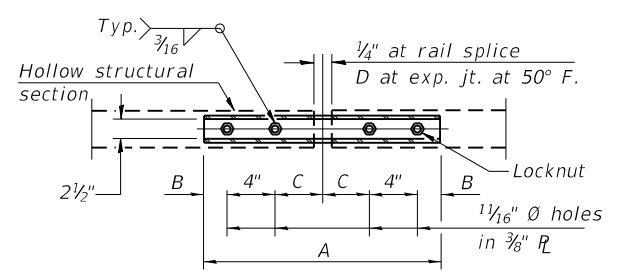


BOTTOM RAIL

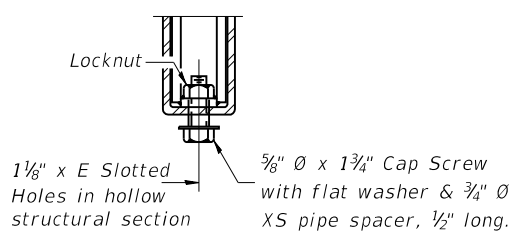


TOP RAIL

SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE R TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:  
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.  
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.  
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.  
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

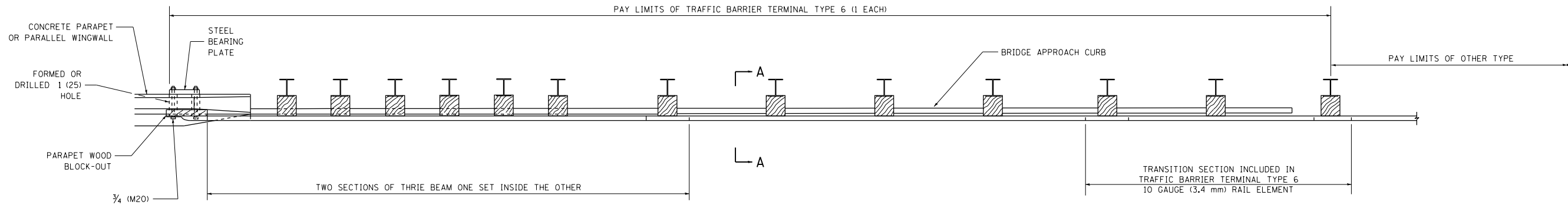
R-31

2-17-2017

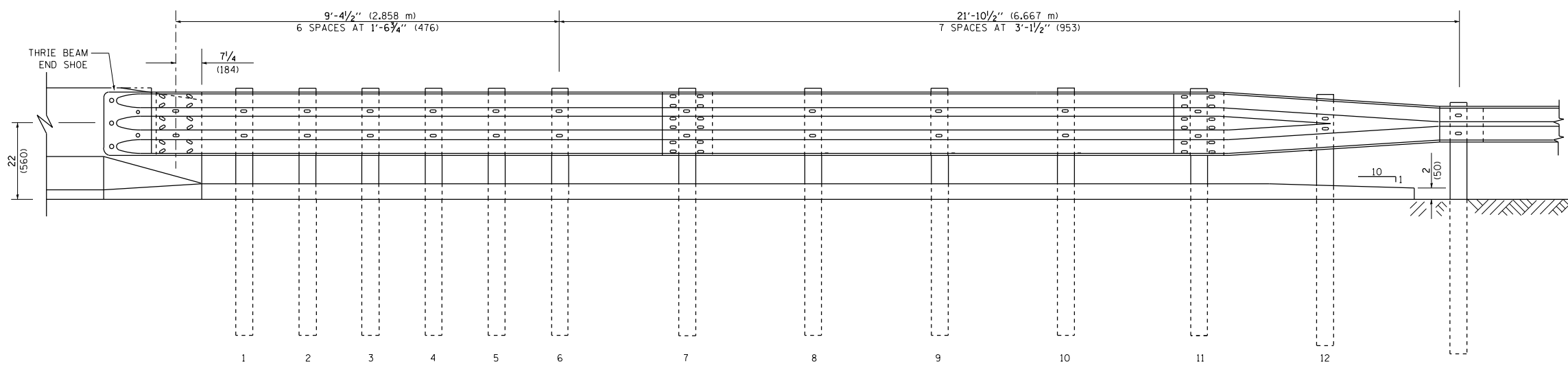
(6'-3" Maximum Post Spacing)

**PARAPET OR WINGWALL**

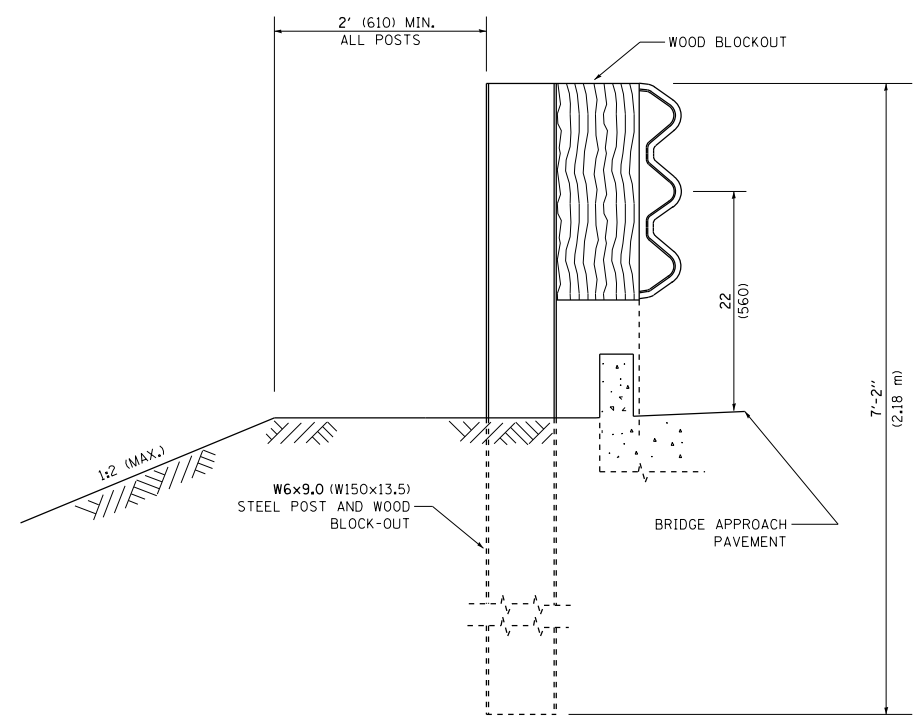
PAY LIMITS OF TRAFFIC BARRIER TERMINAL TYPE 6 (1 EACH)



**PLAN**



**ELEVATION**



**SECTION A-A**

**GENERAL NOTES**

- TO BE USED WHEN CONNECTING TO EXISTING GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
- SEE STANDARD 630001 FOR DETAILS OF GUARDRAIL NOT SHOWN.
- THRIE BEAM RAIL SHALL BE BOLTED TO BLOCK-OUT AT ALL POSTS.
- SEE STANDARD 420401 FOR DETAILS OF BRIDGE APPROACH PAVEMENT.
- ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

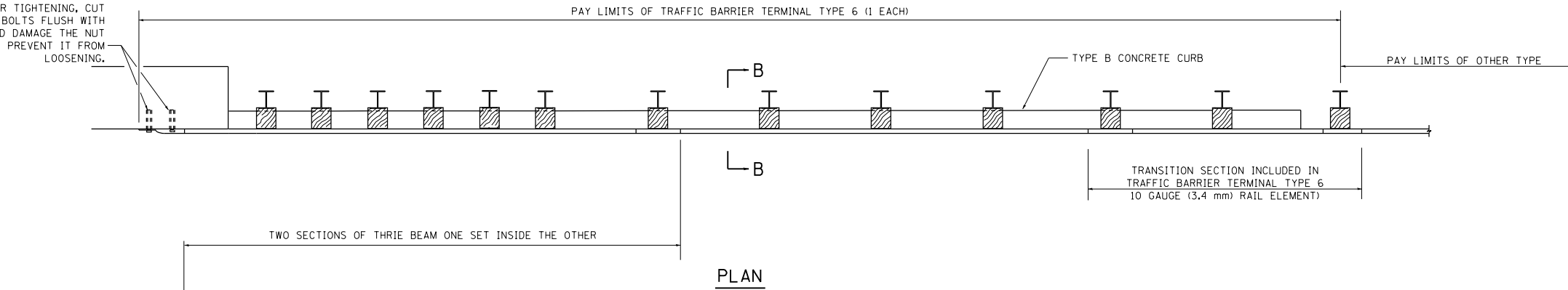
FILE NAME =	USER NAME = pyrzenowskirb	DESIGNED -	REVISED - STATE STANDARD:	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPE 6 TERMINAL FOR USE WITH 21" HIGH SPBGR</b>			F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
pw\1\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\01447\Bridges\Design\Diststd.dgn		631031-05 - 02/19/2008			SCALE: NONE	SHEET NO. 1 OF 3 SHEETS	STA.	TO STA.	VAR.	2017-02TGRR	VARIOUS	29	24
PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -			BM 22			CONTRACT NO. 62F46					
PLOT DATE = 6/29/2017	DATE -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								



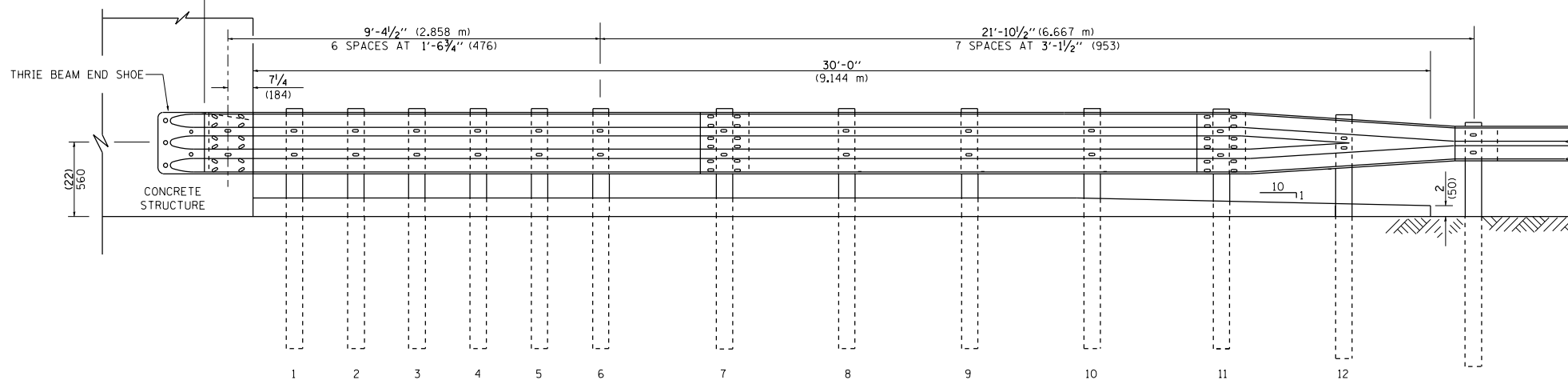
OTHER CONCRETE STRUCTURE

5 EPOXY GROUTED 3/4 (M20) ANCHOR BOLTS WITH STANDARD WASHERS. AFTER TIGHTENING, CUT THE ANCHOR BOLTS FLUSH WITH NUTS, AND DAMAGE THE NUT TO PREVENT IT FROM LOOSENING.

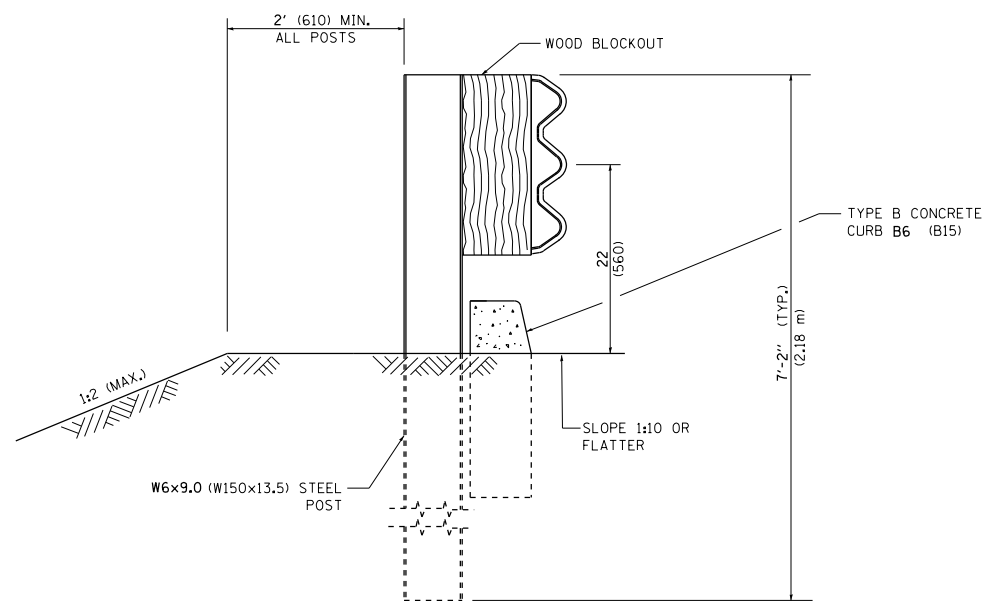
PAY LIMITS OF TRAFFIC BARRIER TERMINAL TYPE 6 (1 EACH)



PLAN



ELEVATION



SECTION B-B

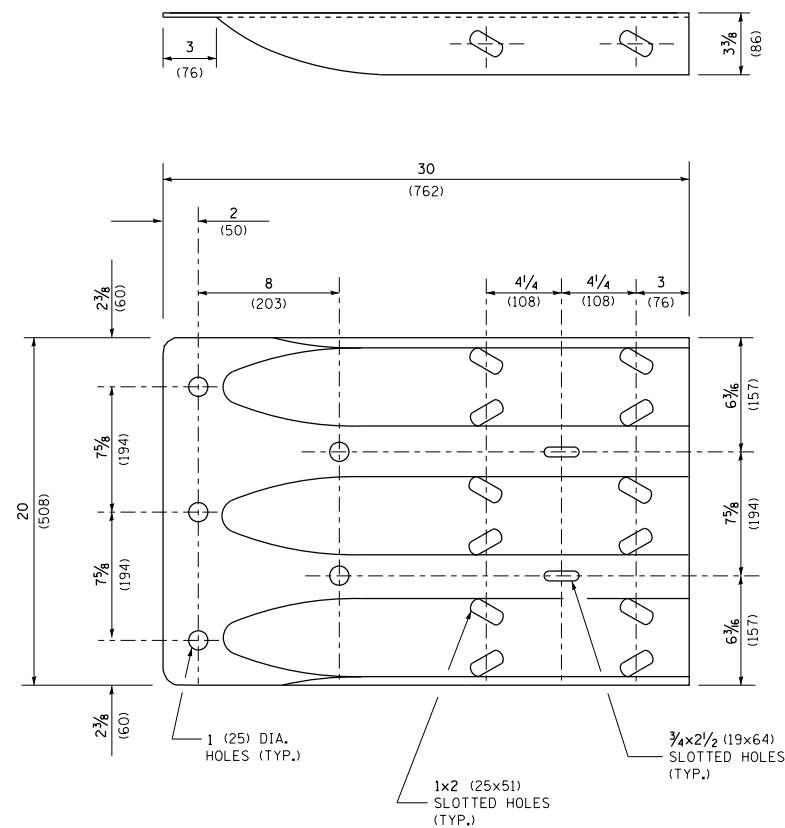
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p:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\1447\Bridges\Design\Diststd.dgn		631031-05	02/19/2008
PLOT SCALE = 100.0000' / 1in.	CHECKED -	REVISED -	
PLOT DATE = 6/29/2017	DATE -	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

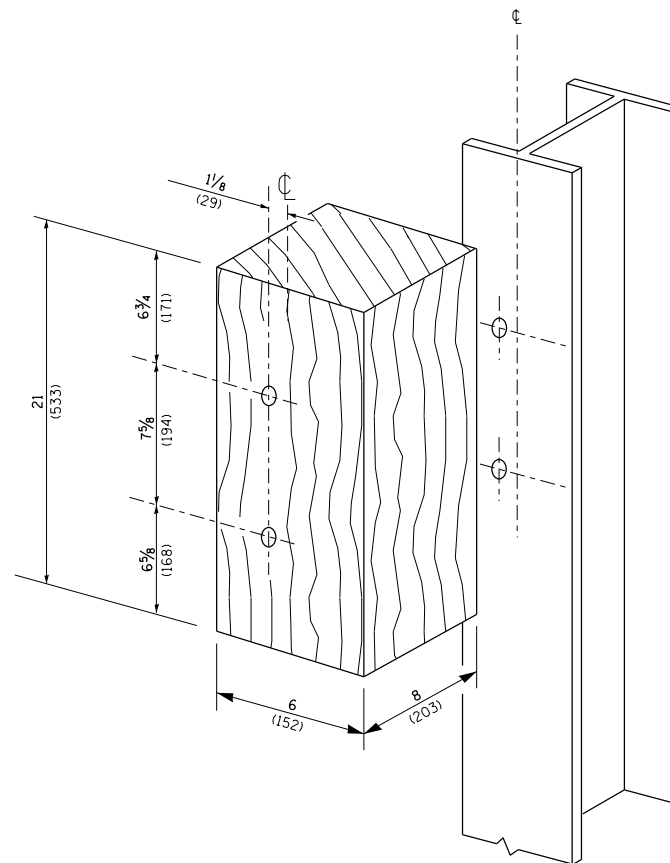
TYPE 6 TERMINAL  
FOR USE WITH 21" HIGH SPBGR

SCALE: NONE SHEET NO. 2 OF 3 SHEETS STA. TO STA.

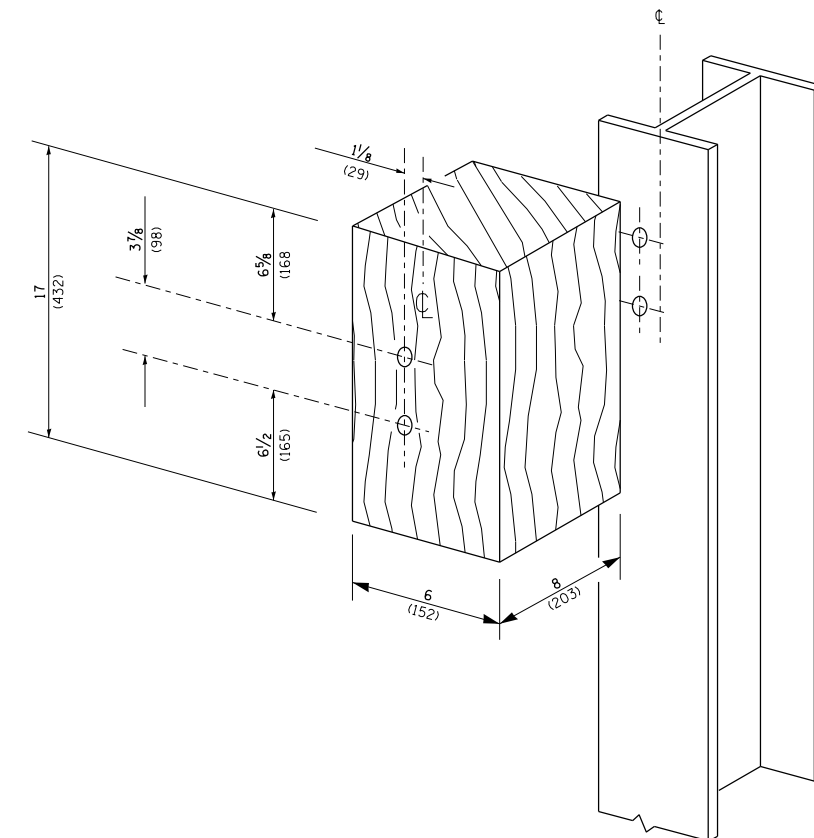
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-02TGRR	VARIOUS	29	25
BM 22		CONTRACT NO. 62F46		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



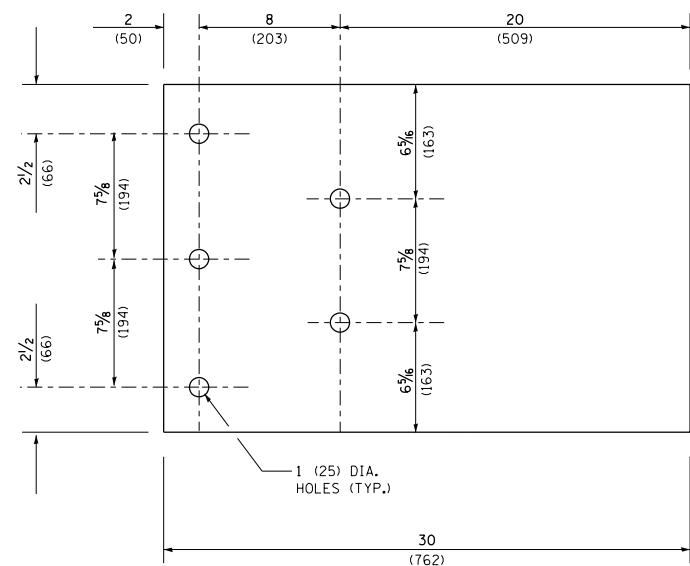
THRIE BEAM END SHOE DETAIL



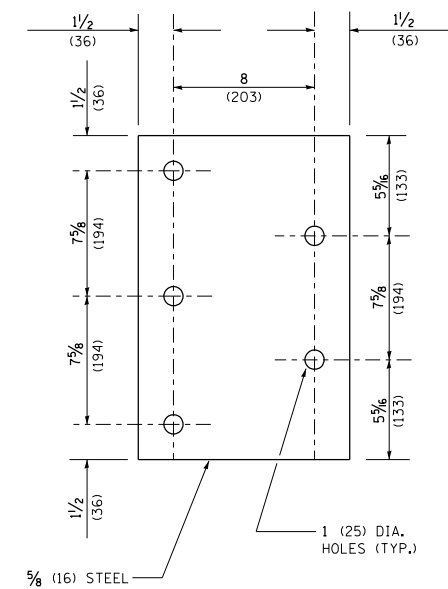
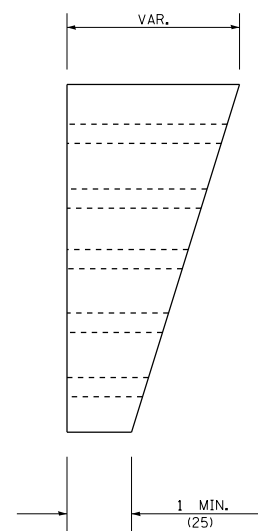
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL



PARAPET WOOD BLOCK-OUT DETAIL



PARAPET STEEL BEARING PLATE DETAIL

(5 EACH INDIVIDUAL 5x5x3/8 (125x125x16) STEEL PLATES WITH CENTERED 1 (25) HOLES MAY BE SUBSTITUTED FOR THE PLATE SHOWN.)

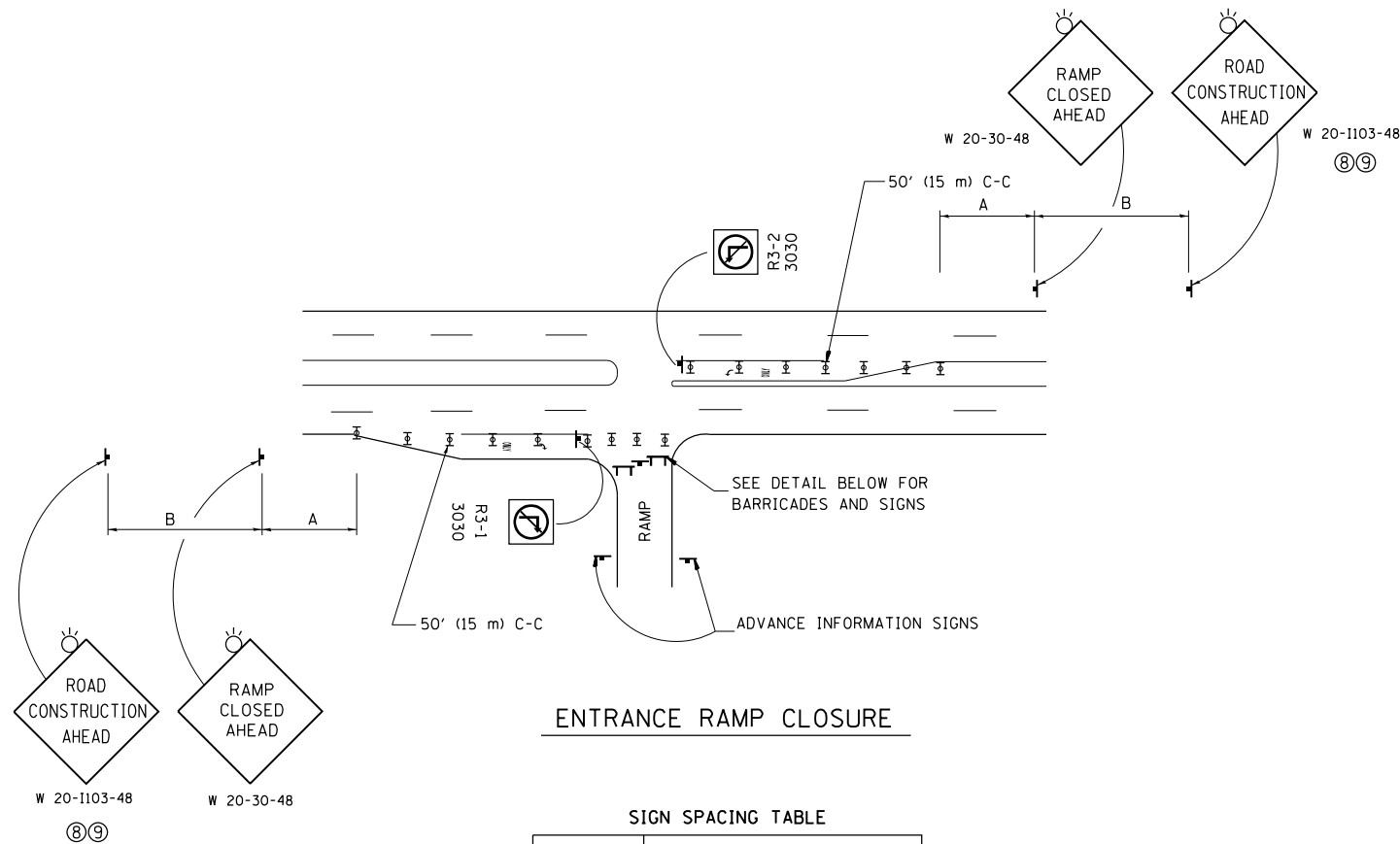
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p:\11\084EBIDINTEG.illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\1447\Drawings\Design\Diststd.dgn			631031-05 - 02/19/2008
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISOR -	REVISOR -
PLOT DATE = 6/29/2017	DATE -	REVISOR -	REVISOR -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TYPE 6 TERMINAL  
FOR USE WITH 21" HIGH SPBGR

SCALE: NONE SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	26
BM 22			CONTRACT NO. 62F46	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

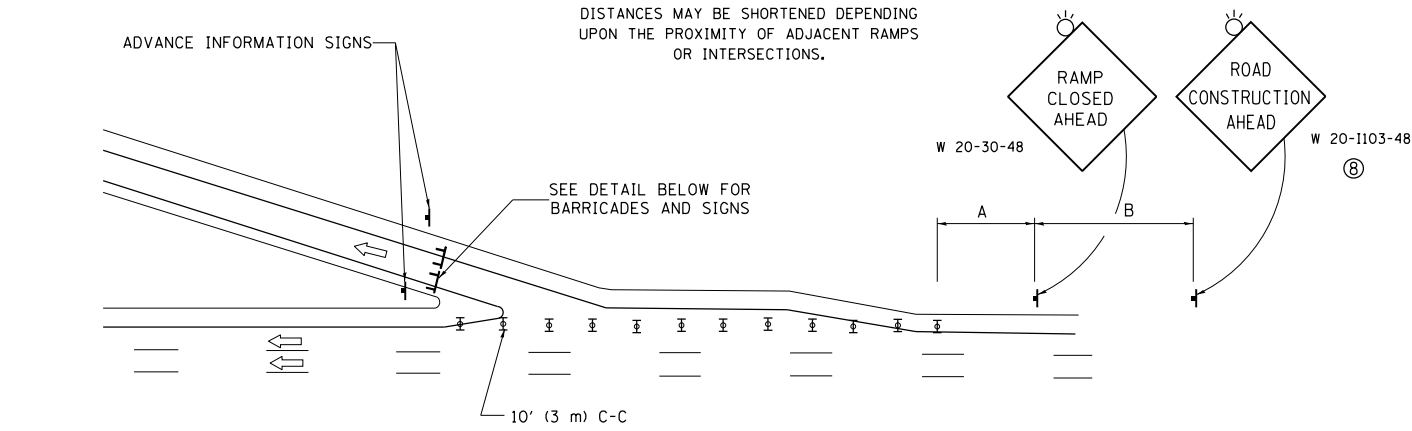


**ENTRANCE RAMP CLOSURE**

**SIGN SPACING TABLE**

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY <24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

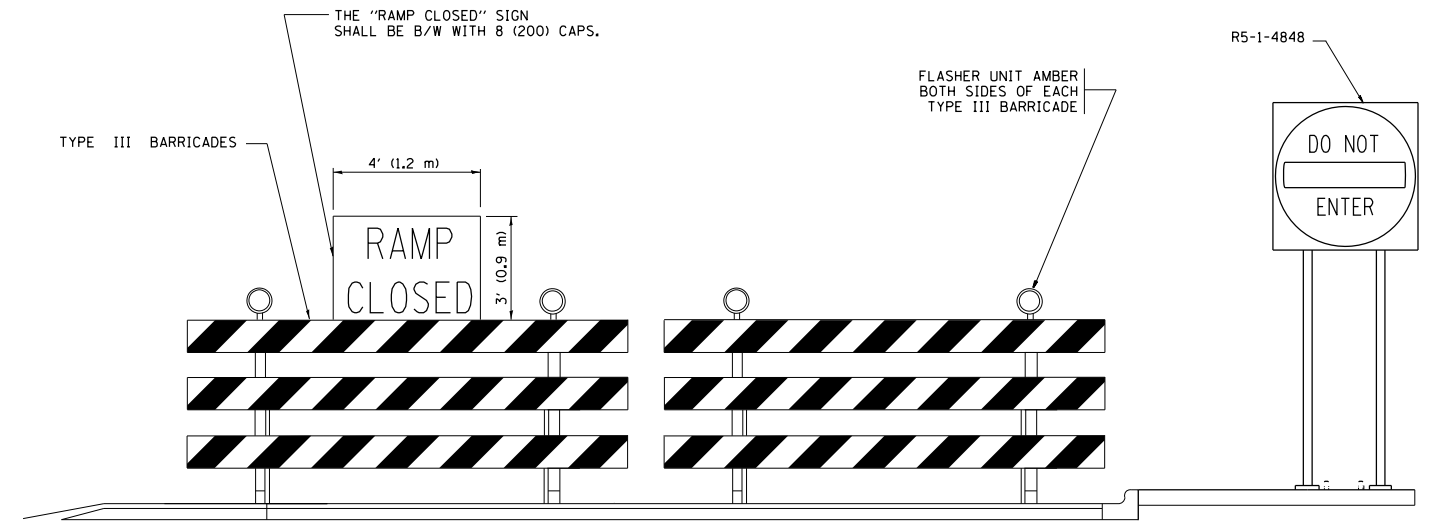
DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.



**EXIT RAMP CLOSURE**

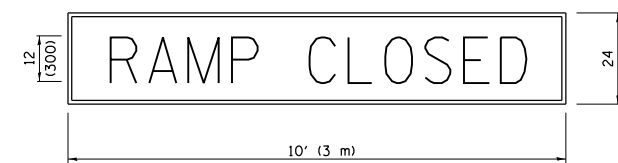
**SYMBOLS**

- ⊥ TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- ⊓ TYPE III BARRICADE WITH 2 FLASHING LIGHTS



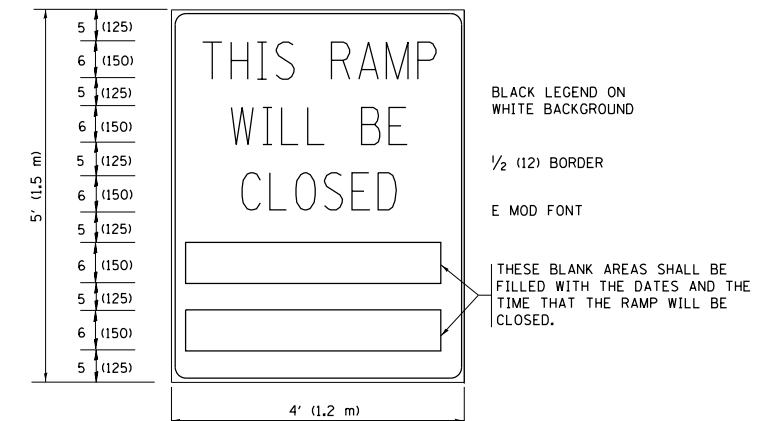
**DETAIL FOR REQUIRED BARRICADES & SIGNS**

**RAMP CLOSURE ADVANCE WARNING SIGN**



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY  
E MOD FONT  
1 (25) BORDER  
THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

**RAMP CLOSURE ADVANCE INFORMATION SIGN**



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.  
THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

**GENERAL NOTES:**

- ① CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
- ② STEADY BURN LIGHTS WILL NOT BE REQUIRED FOR DAY OPERATIONS.
- ③ A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEDED BY A W20-7 FLAGGER WARNING SIGN.
- ④ ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
- ⑤ THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
- ⑥ AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
- ⑦ THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
- ⑧ ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
- ⑨ ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

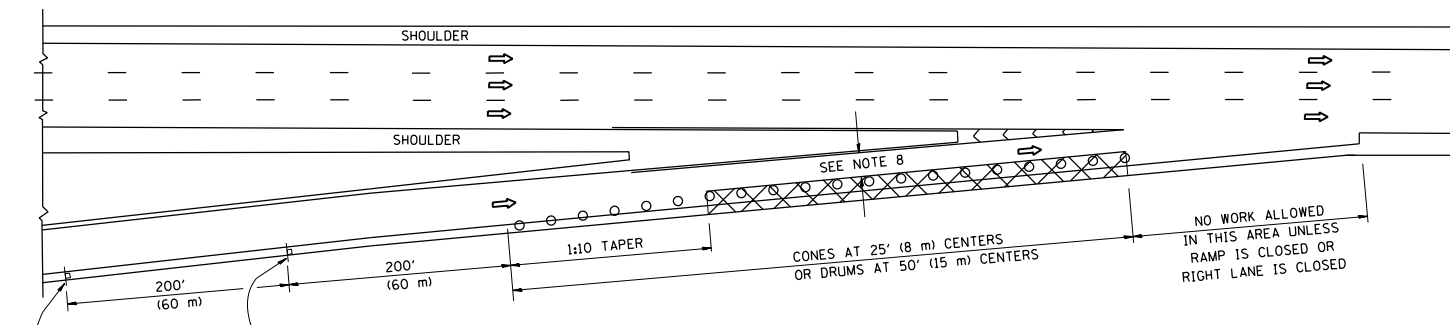
FILE NAME =	USER NAME = pyrzenowski	DESIGNED - DWS	REVISED - JAF 02-06
pw\1\084EBIDINTEG\illinois.gov\PIWIDOT\Documents\IDOT Offices\District 1\Projects\01447\Drawings\Design\Diststd.dgn		CHECKED -	REVISED - SPB 01-07
		DATE - 02-83	REVISED - SPB 12-09
			REVISED - MD 06-13

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

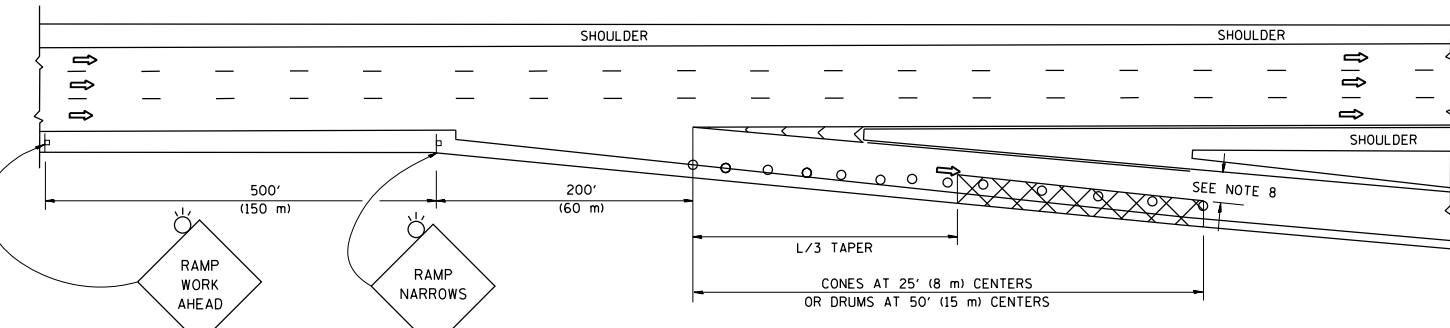
<b>ENTRANCE AND EXIT RAMP CLOSURE DETAILS</b>	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	27
TC-08		CONTRACT NO. 62F46		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

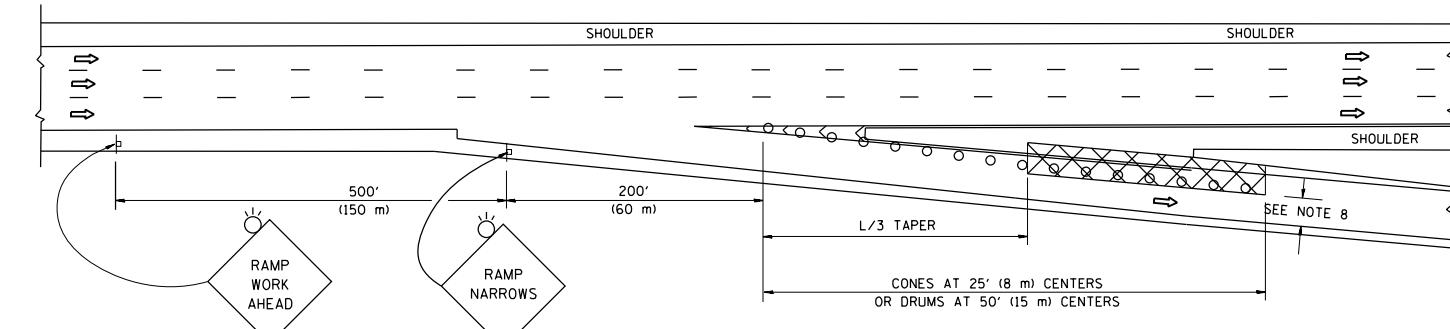
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



TYPICAL EXIT RAMP

SYMBOLS

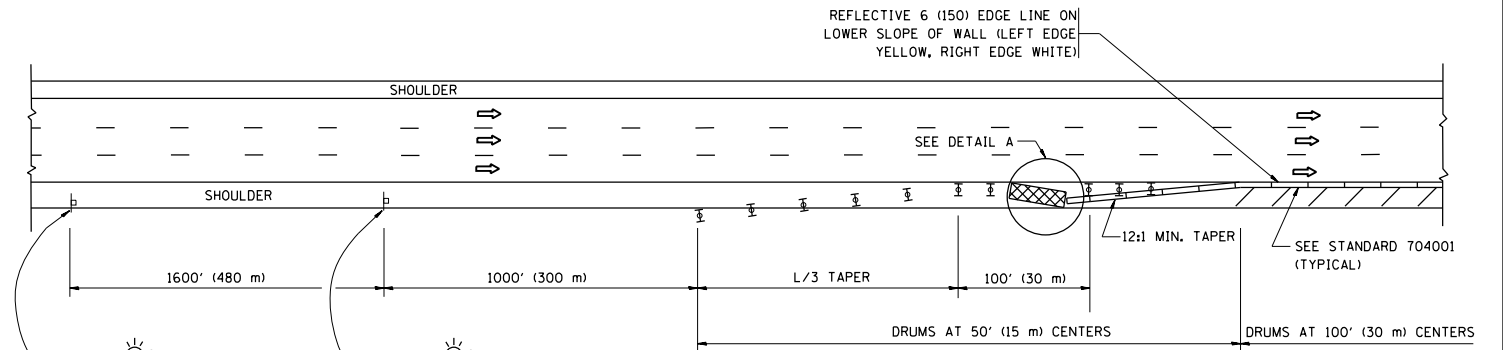
- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

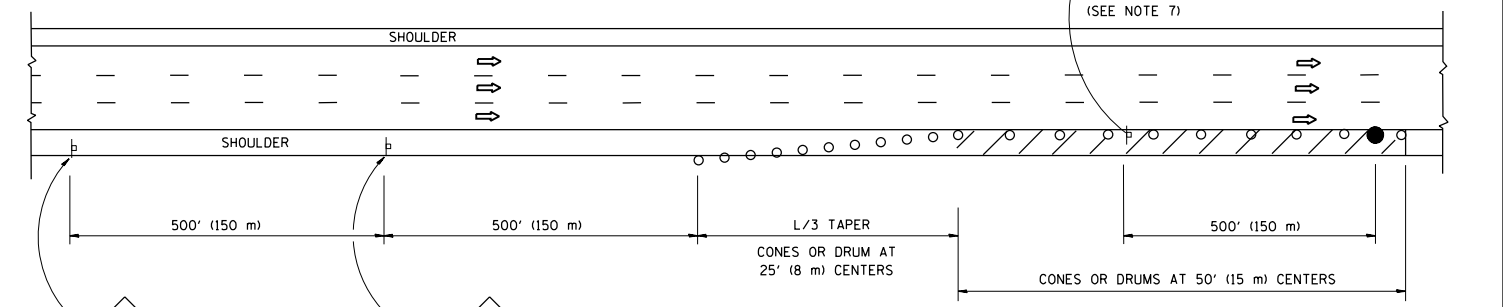
1. THE "L" DISTANCE EQUALS:
 

SPEED LIMIT	FORMULAS
45 mph (80 km/h) OR GREATER:	METRIC    ENGLISH L=0.65(W)(S)    L=(W)(S)
W = WIDTH OF OFFSET IN FEET (METERS) S = NORMAL POSTED SPEED MPH (KM/H)	
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

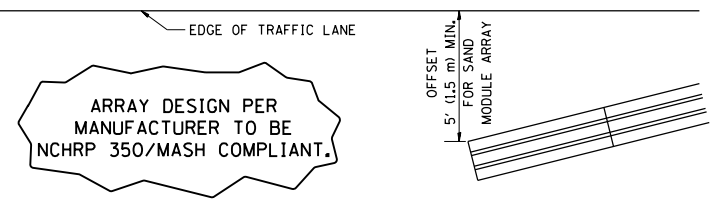


PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:  
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCRANCH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"  
IMPACT ATTENUATOR, TEMPORARY  
(SEE NOTE 5)

5. THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
  - a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
  - b. THE WORK AVTIVITY REQUIRES FREQUENT ENCRACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION  
16' MIN. WIDTH CURVE SECTION.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME =	USER NAME = pyrzenowski	DESIGNED -	REVISED - J.A.F. 12-06
pw:\IL\084EBIDINTEG\illinois.gov\PI\DOT\Documents\DOT Offices\District 1\Projects\01447\Drawings\Design\DWG\5.dgn		CHECKED -	REVISED - S.P.B. 01-07
		DATE - 11-96	REVISED - S.P.B. 12-09
			REVISED - M.D. 06-13

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

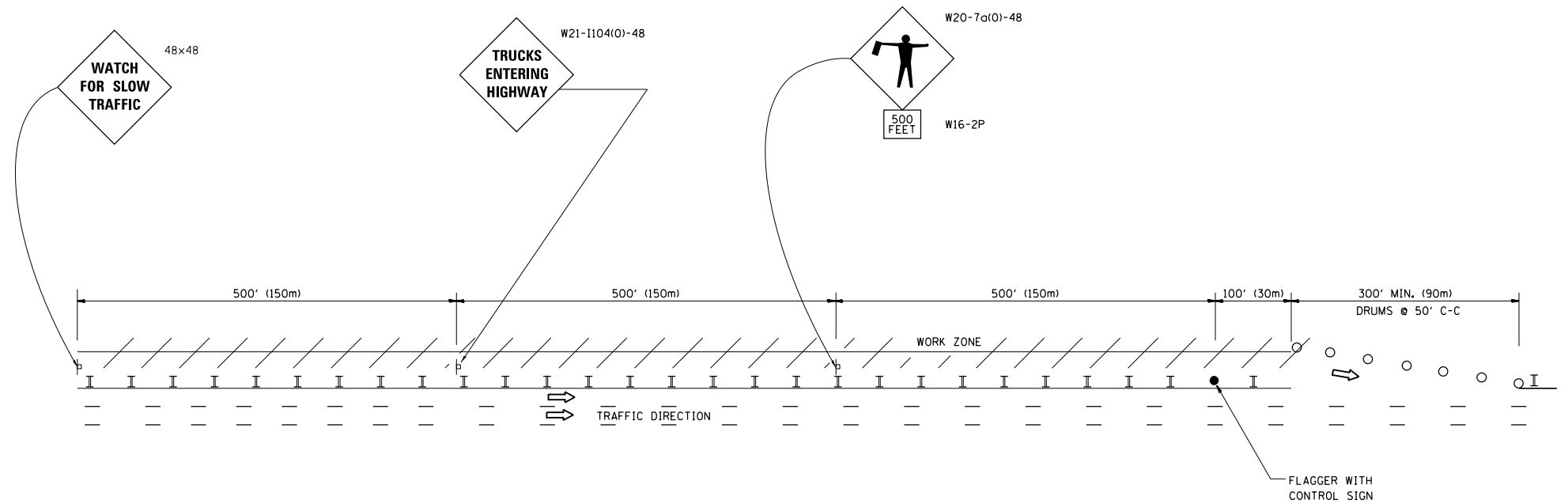
TRAFFIC CONTROL DETAILS FOR FREEWAY  
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

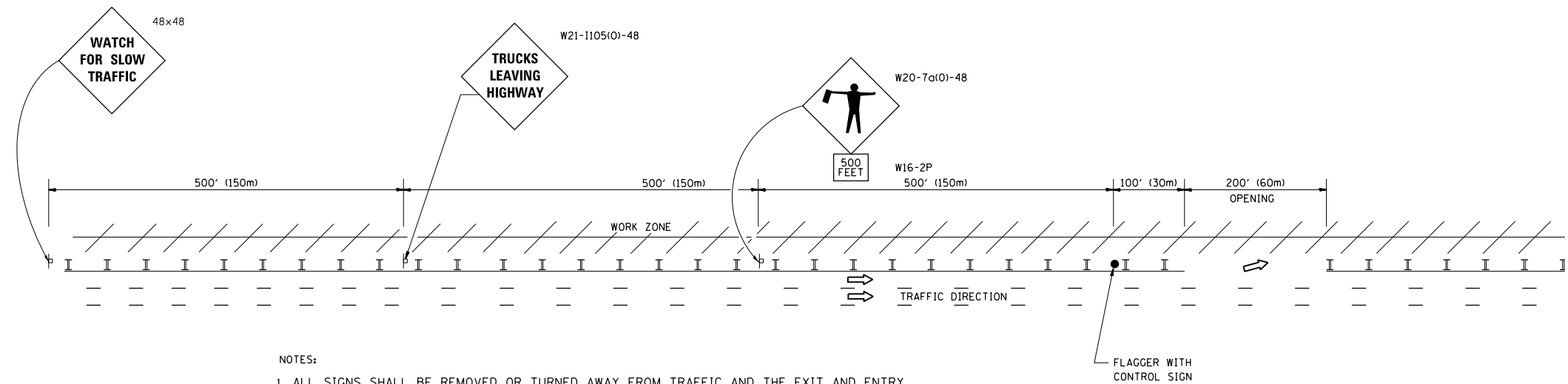
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	28
TC-17		CONTRACT NO. 62F46		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS**

**WORK ZONE EXIT OPENING**



**WORK ZONE ENTRY OPENING**



**NOTES:**

1. ALL SIGNS SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE OPENINGS SHALL BE A MINIMUM OF ONE HALF MILE APART AND A MINIMUM OF ONE QUARTER MILE FROM ALL ENTRANCE AND EXIT RAMPS.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS
5. FLAGGERS SHALL NOT STOP TRAFFIC OR DIRECT TRAFFIC INTO AN ADJACENT LANE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

FILE NAME =	USER NAME = pyrozenowski	DESIGNED -	REVISED - J.A.F. 02-06
pw:\IL\084EBIDINTEG.illinois.gov\PWIDOT\Documents\IDOT Offices\District 1\Projects\14470\14470.DWG	PROJECT DATA\Design\Diststd.dgn	CHECKED -	REVISED - S.P.B. 01-07
PLOT SCALE = 100.0000' / in.	DATE -	CHECKED -	REVISED - S.P.B. 12-09
PLOT DATE = 6/29/2017	DATE -	CHECKED -	REVISED - M.D. 06-13

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FREeway/EXPRESSWAY SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS ON FREEWAYS/EXPRESSWAYS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2017-027GRR	VARIOUS	29	29
<b>TC-18</b>		<b>CONTRACT NO. 62F46</b>		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				